

*Scorpaena rubropunctata*  
*hololepis*

*Scorpaena* *suamensis*  
*nubilosa*, Garrett.

116

56

B. 7; D. 13-4; A. 3-6; V. 1-5; P. 7-11; L. 5, 1, 6, 5, 1, 4.

The upper line of the body is rather strongly arched, being highest at the sixth or seventh dorsal spine. The head is not quite a third of the total length. Its thickness as compared to length is as two to three. The eyes are circular, their diameter entering four times in the length of the head, and once in advance of their own orbits. The hinder tip of the maxillary reaches a little posterior to the center of the eye. Minute scales may be observed on the cheeks and opercular pieces. The spines on the head are furnished with little plicaments, and similar ones may be traced along the lateral line. A palmate circle marks the position of the nostrils.

The dorsal fin commences a little in advance of the opercular corner. Its spiny portion is rather low, arched in outline, the fifth or sixth ray, tallest, and the others gradually decreasing either way. The soft portion is higher than the spiny, which height equals the length of its own base, and its upper margin is oblique to



rounded.

Color of the living fish dark gray, and mottled with different shades of dusky-brown. A conspicuous diffuse black spot on the opercle. Sides silvery yellow and rayed with brown. The fins have a dull yellow ground color marbled with different shades of brown; the marblings are disposed transverse or slightly oblique to the rays.

Length, 4 inches

Habitat. Society Is.

Remarks.—This is the commonest species inhabiting the above locations. Its most obvious character is its low dorsal and the black opercular spot.

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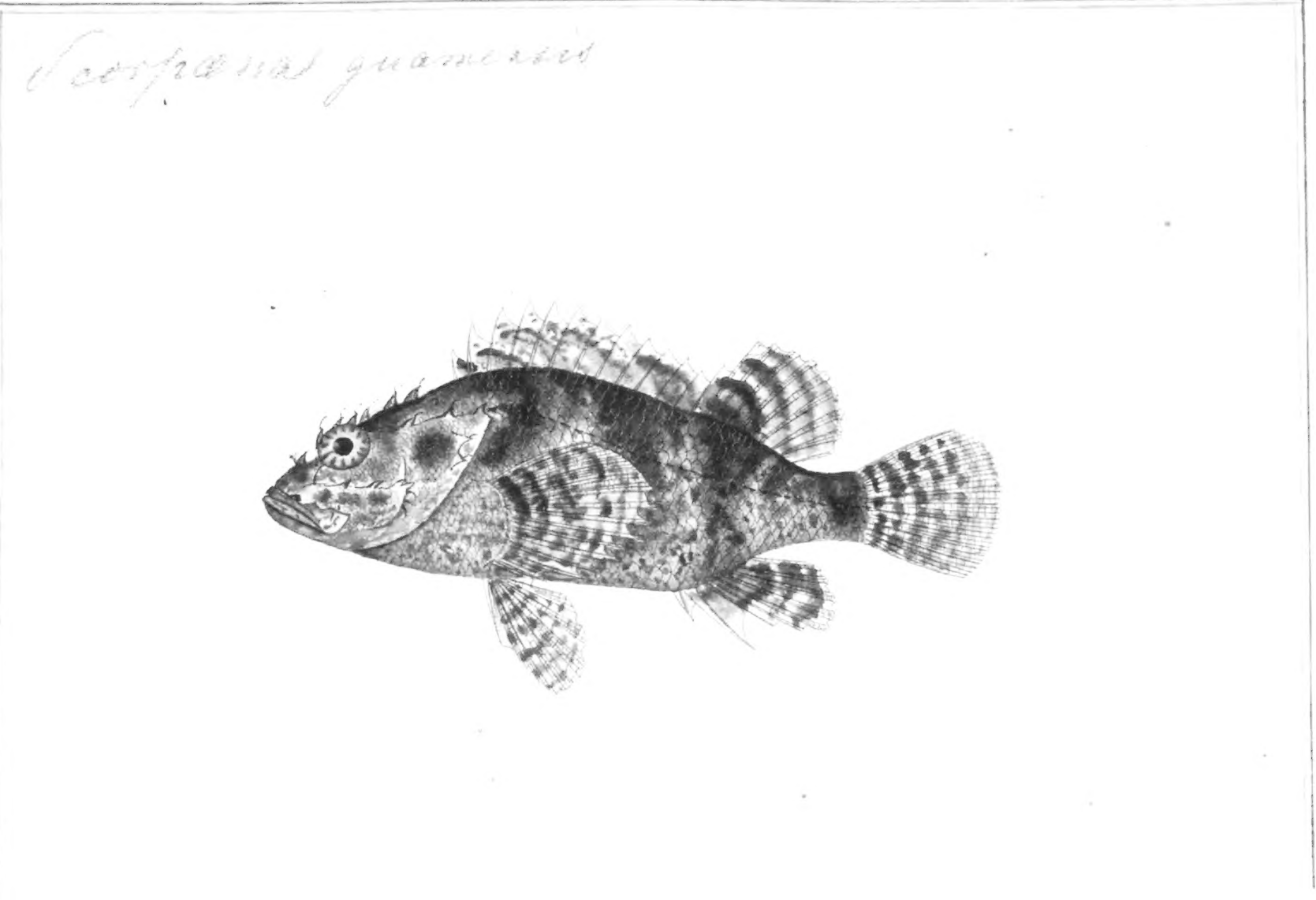
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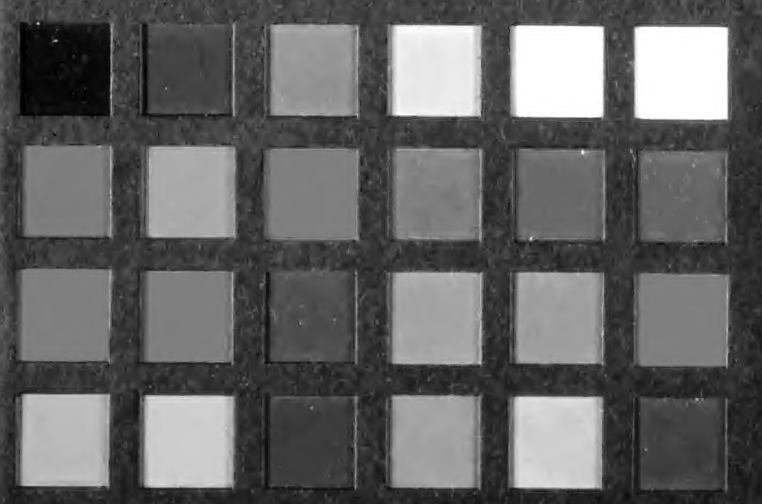
Dr. G.

56

*Scorpaena guamensis*



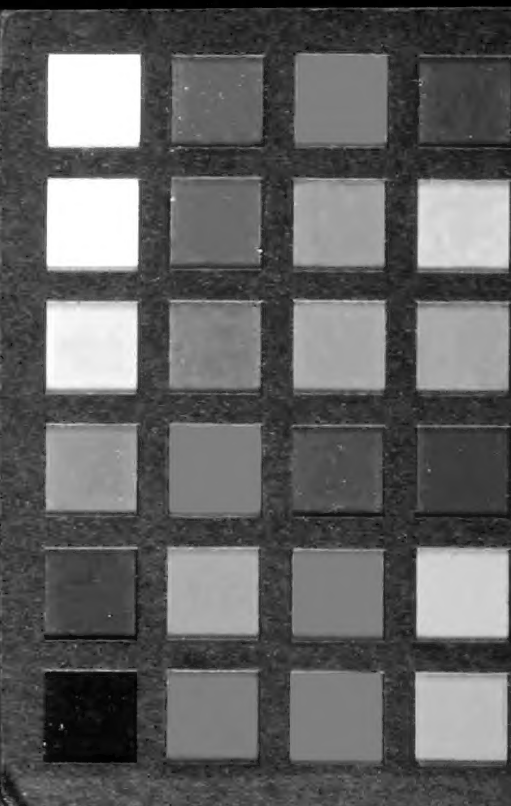
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Scorpaena parvipinnis, Garrett

D. 13-10; A. 3-5; V. 1-5; P. 7-9; C. 5, 1, 6, 5, 1, 3.

In this species the upper and lower outlines are quite similar, being gently arched. The greatest depth of the body falls slightly short of one-third of the total length and the greatest thickness at the base of the head is a little more than two-thirds of the above mentioned depth. The head constitutes just one-third of the <sup>whole</sup> fish. The eye is large, circular, its diameter being nearly one-fourth of the length of the head. Four spines may be seen along the upper edge of the orbit, and the same number on each side of the occipital region and nape, the posterior one the largest. Two intraorbital spines, one on the nasal bone, and a longitudinal row of four along the suprathymic region. Two on the opercle, the lower one long and projecting posterior to the margin of that bone. At least one may be observed on the humeral region, one on the infraorbital, three on the margin of the preopercle, and a longitudinal row of irregularly disposed ones along the cheek. The lower jaw is slightly longer than the upper, and the tip of the maxillary extends as far back as the hinder border of the eye. Five scales envelope the basal portion of all the fins except the ventral, and cover all parts of the head except the jaws and lower half of the maxillary bone. Minute filaments are observed in all parts of the fish, being more numerous in the anterior third of the body. The dorsal and anal fins are small, the former commencing above the origin of the





lateral line. The spiny portion of the dorsal is very low, gently arched, and constitutes nearly two-thirds of the fin. The soft portion of the anal fin is very narrow and rounded off.

The head and anterior half of the body is grayish, passing into light carnation beneath and obscurely clouded with dusky. The posterior half of the body is dusky, which fades into pink beneath, maculated with small darker spots. The caudal trunk is pink. Two large dusky spots on the anterior dorsal region. Vides greenish yellow. Fing pinky-red, the spiny anal mottled with dusky, and the other fins dotted with pinky-brown and a bar of the same color on the caudal base.

Length 4 inches.

Hab. - Sandwich Is.

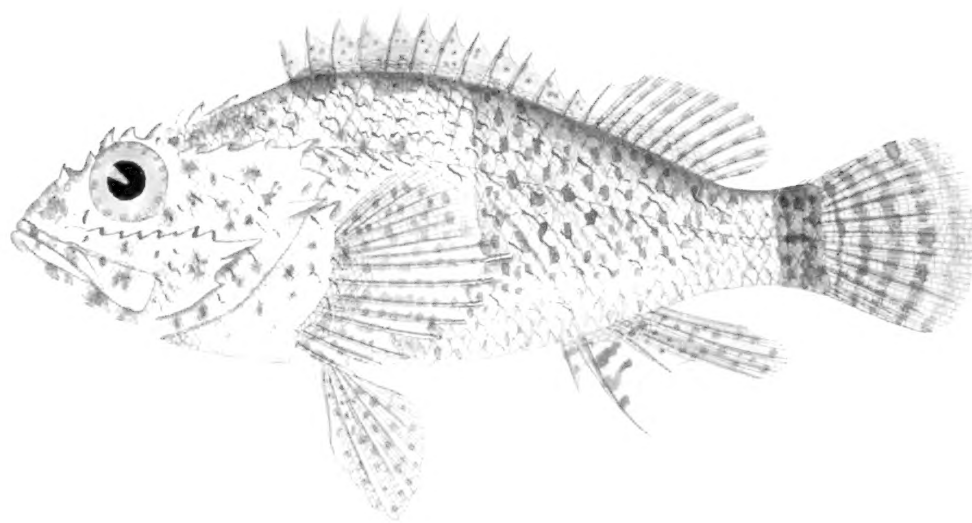


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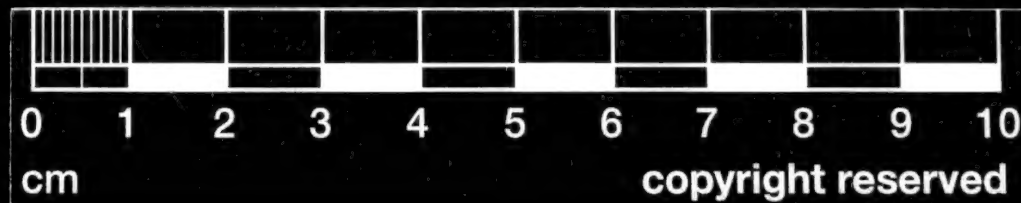
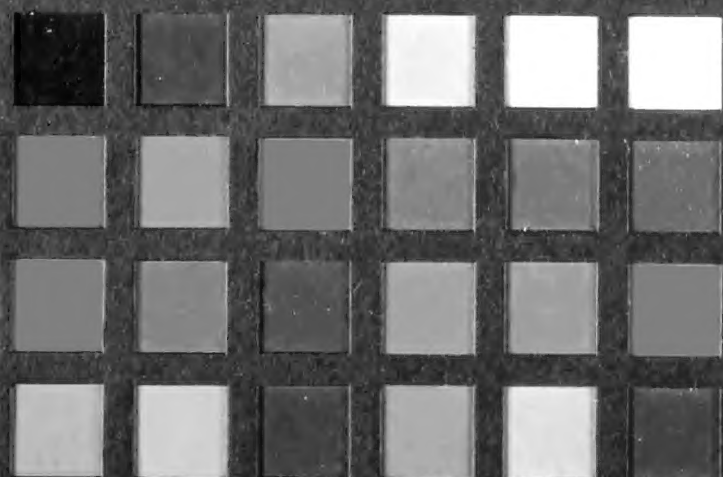
*Scorpaena parvipinnis*  
t. 52. f. D.

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*Scorpaena parvipinnis*



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*Scorpaena costii*, <sup>gns</sup>

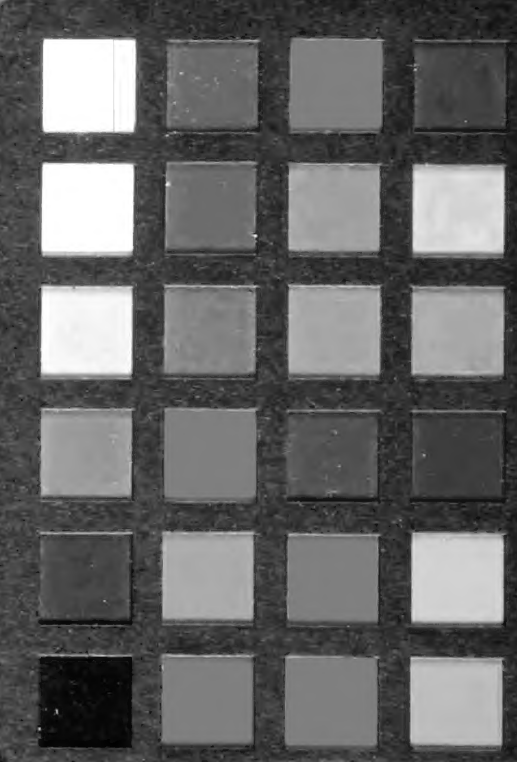
Scorpaena No 371

113

D. 12-9; A. 3-4; V. 1-5; P. 18; C. 9, 1, 6, 2, 1, 4.

Color dusky brown on the upper half with darker marblings, and the lower half rich yellow, beautifully mottled with different shades of brown and light vermillion. The cutaneous cirrhi whitish. Gills transversely barred with with brown and blackish. The cirrhi attached to the lower jaw are light yellow. The upper portion of the head is blotched with light yellow, two similar blotches on the back and one on the caudal trunk. Irides greenish yellow, rayed with brown black. The dorsal fin is beautifully marked with different shades of brown and reddish on a faded yellow ground. The marblings assuming oblique cloud-like bands. The caudal is similarly marked, but the striped marblings are transverse to the rays and more or less interrupted. The anal is pale blotched with vermillion in which are dashes of brown. The ventrals are light vermillion and marbled like the anal. The pectorals are rich yellow and beautifully marbled in stripes parallel to the curvature of their base.

The greatest depth at the base of the head is a little more than a fourth of the entire length. The dorsal region is slightly concave at the posterior third of the spiny dorsal. The head comprises about one-third of the fish. The eyes as compared to the length of the head is as one to six. The whole upper half of the head is jagged with spines





which are distributed as follows: two near  
the nostrils, three on the superior crest of  
the orbits all curved backward, and several  
of various sizes behind the orbits; one at the  
origin of the lateral line, two or three on  
the opercle, a horizontal range of several  
on the cheek, and two or three on the preopercle  
margin. The hinder preopercle margin is  
furnished with fine cutaneous cirrhi and  
two on the cheek. There are also two near  
the upper jaw, one of which is lacinated,  
and five similar lacinated ones suspended  
from each side of the lower jaw.

For the structure of the fins see  
the drawings.

Length 10 inches.

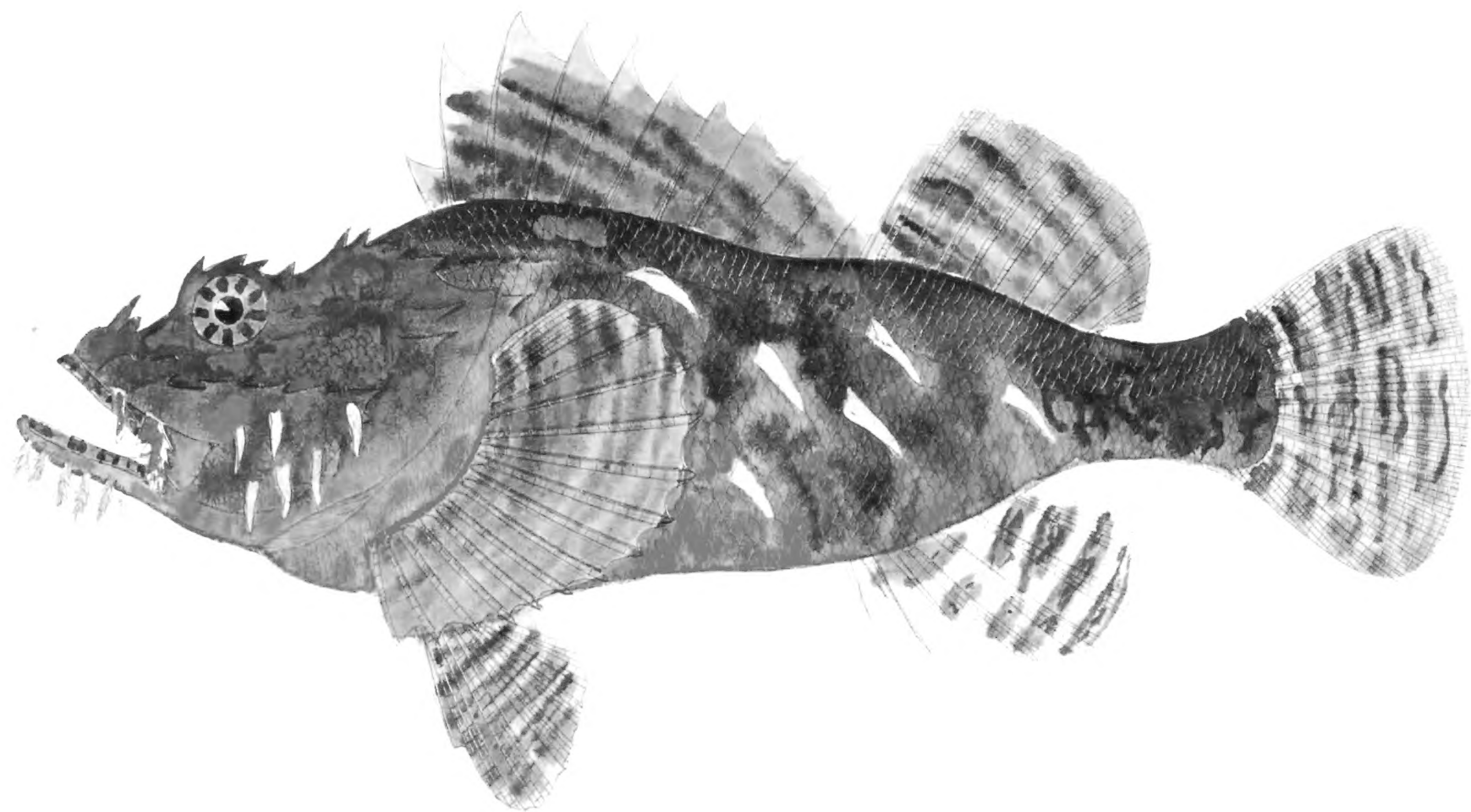
Hab. - Sandwich Isls.



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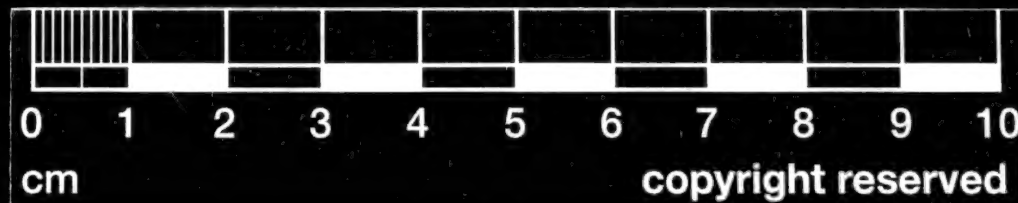
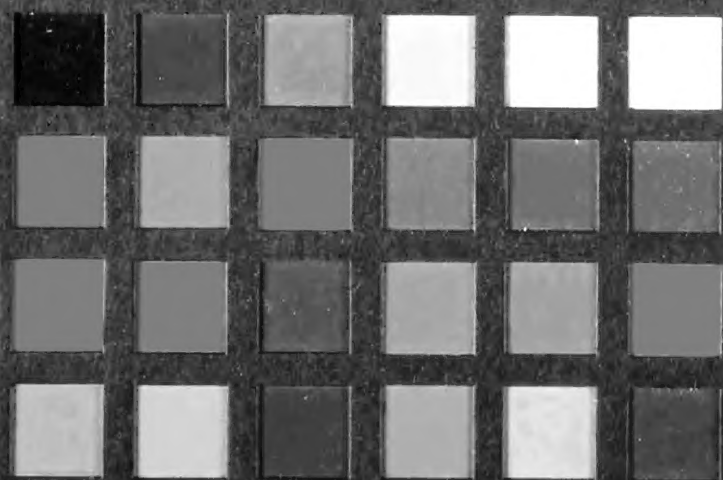


Z. Taf. 55 *Scorpaena cookii*



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*Scorpaena cookii*



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Family Scorpænidae, Swainson

The body is covered with scales, though sometimes naked; when they exist they are ctenoid in structure. The head is generally large, more or less spinous, and often exhibiting cutaneous appendages which gives them a hideous aspect. The two dorsals are more or less combined, and the spiny portion is the longer.

Genus Scorpæna, Artdi.

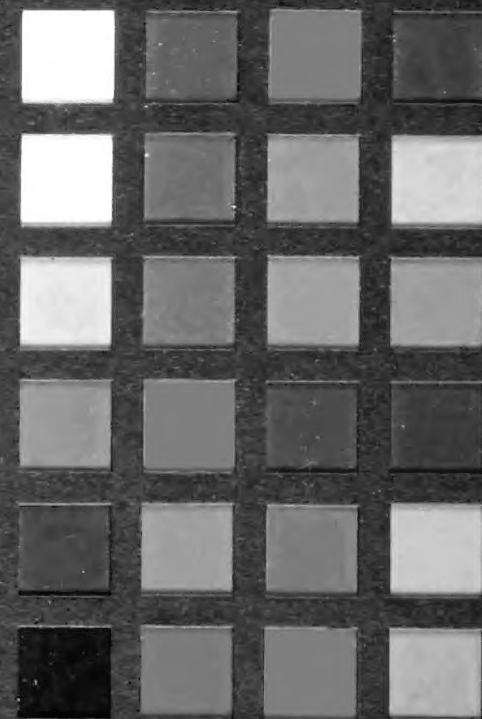
Body oblong, compressed. Scales small, Head large, compressed, slightly scaled or naked, more or less spined and furnished with cutaneous flaps. Mouth large, oblique; lower jaw the longer. Jaws, vomer and palatines armed with villiform teeth, disposed in bands. Eyes interrupting the upper line of profile. Lateral line concurrent with the dorsal outline. Branchiostegal rays seven. The long spiny dorsal is more or less united to the soft part. Caudal rounded. Anal opposite to the soft dorsal, smaller than the latter fin and more distant from the base of the caudal. Ventrals oval,

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are inserted posterior to the pectorals.  
The pectorals are very broad, rounded,  
and have stout undivided lower rays.

These fishes, though eaten by the  
natives, are much dreaded in consequence  
of the painful wounds inflicted by their  
spines.

*Scorpaenidae*

*Scorpaena variegata*, Quoy.

S. 12-14; A. 5-7; D. 11-13; L. 5, 6, 5, 1, 4.

The greatest depth of the body, imme-  
diately above the base of the pectorals,  
equals the breadth of the spinous portion  
of the dorsal, and the greatest thickness  
at the same point is three-fourths of the  
above mentioned depth. The large head  
constitutes one-third of the total length.  
The eyes are large, longitudinally oval,  
their length as compared to the head  
is as one to five. The hinder tip of  
the maxillary is on a plane with the  
posterior border of the preopercle. The upper  
posterior portion of the head is covered  
with very small scales, and the superior half  
is ornamented with numerous simple and  
pinnated plaques, the latter much like the

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the the body, the dorsal and pectoral fins, the obscure numerous hair-like filaments, and a series of large granules along the lateral line. The superior orbital spines are three in number and strongly recurved. The occipital spine is furnished with several smaller spines, some of which are tipped with the granules. A single spine on the occipital bone, one on each side of the eye, and the termination of the opercle is situated about two along the cheek and front of the eye in the perpendicular direction.

The preopercular spine of the dorsal fin is very short, the second being nearly as tall as the third, which taller is the highest, and is equal to one-third of the length of the base of that portion of the fin. The soft portion of the dorsal is similar to the spinous part but its height and is gently arched along its superior margin. It is not so continuous to a membrane in the front of the caudal. The anal is deeper than the soft part of the dorsal, but much shorter along its base. The length of the pectorals and ventrals is equal.

Color dull brownish, with blackish brown mottling, especially bright brownish red beneath the head and breast minute, and



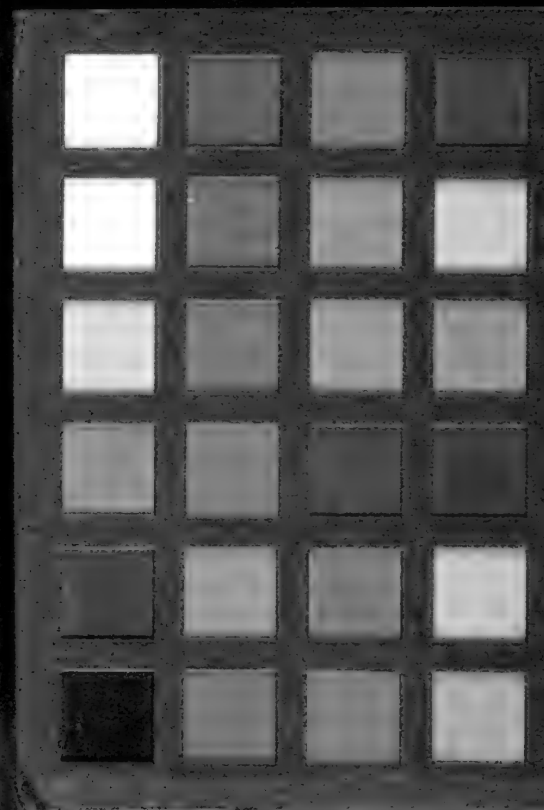


pappus plumbeous with slender rays and  
 carmine-red. of which the tubular appendages  
 rose-red. very minutely and closely clothed  
 with white. The inner portion of the pappus  
 are golden yellow and their outer part rose-  
 red which is articulated with brown. All  
 the pappi are beautifully marbled with  
 different shades of brown, rose red and gray-  
 ish. The central and basal parts their mar-  
 blings are a lively vermilion red ground.  
 in all the pappi, except the sternal, the  
 marblings run transversely to the axis, in  
 the former, they are more or less oblique.

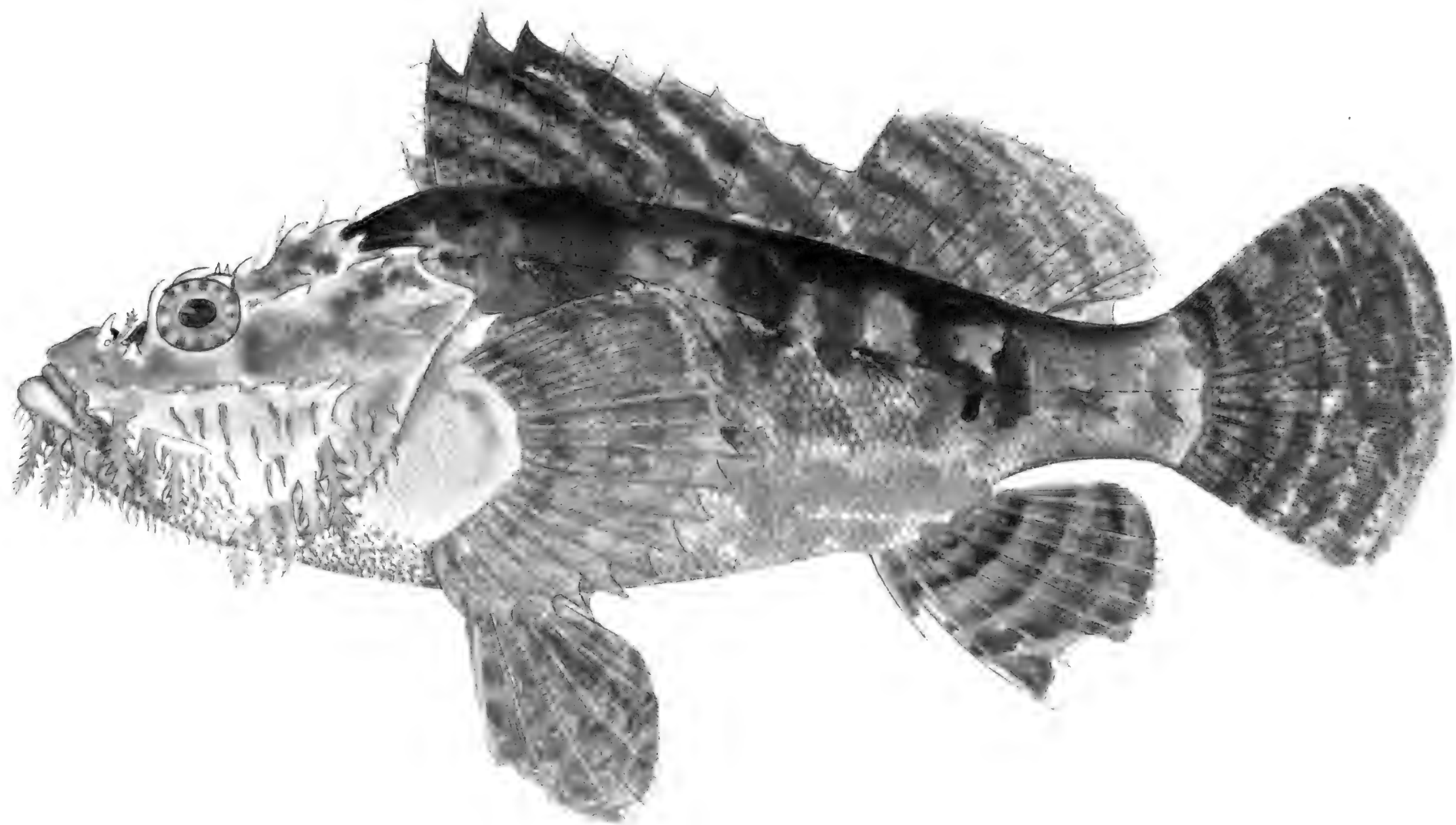
Length, 10 inches.

Habitat. - Haiti, Iles.

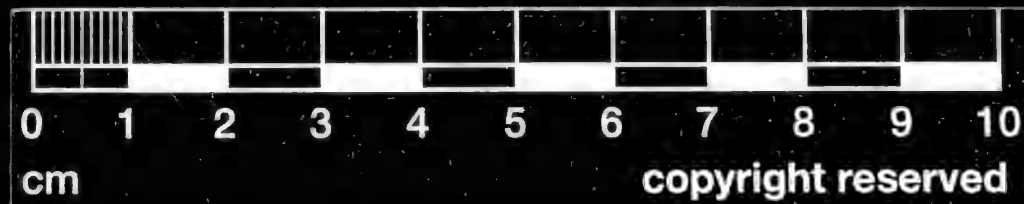
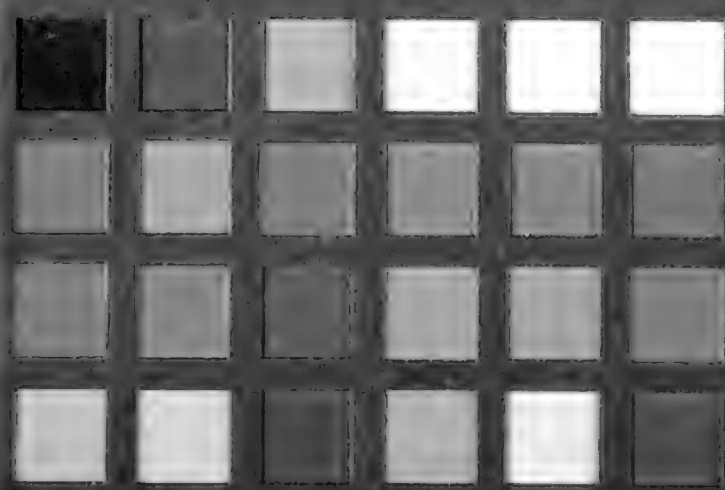
Remarks. - A rare and beautiful  
 species, of which I have no other example.  
 The colored drawing was made from an  
 individual which has been identified and  
 known, and no doubt much changed in  
 its colors.



*Scorpaena cirrhosa*



*Scorpaena cirrhosa*





2.1. Сопоставляя симптомы, у

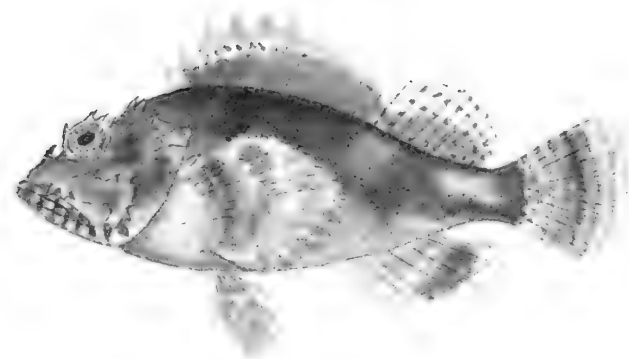
Scaphium No 756

The latter species are pro-  
cured at the same locality, viz by  
the same person. The species  
color brown with darker smoky, the head  
climber black, its lower part, breast and  
abdomen faintly black, lower part  
of head turned, the lower sides brown  
with a circle of orange, the dorsal  
olive green, the spinous further red olive,  
the rest further much colorless as it appears  
half and the wings dotted with brown,  
and the other fine more or less mottled  
in the shades of brown.



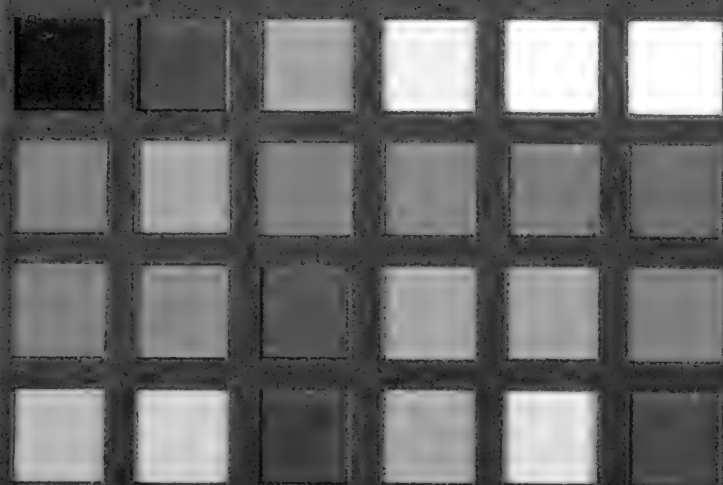
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? *Scorpaena cinerea*

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*Scorpaenidae*  
*Scorpaenidae*

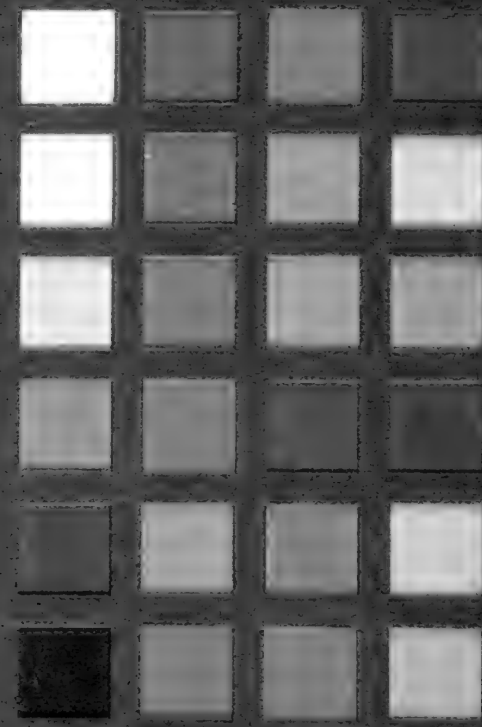
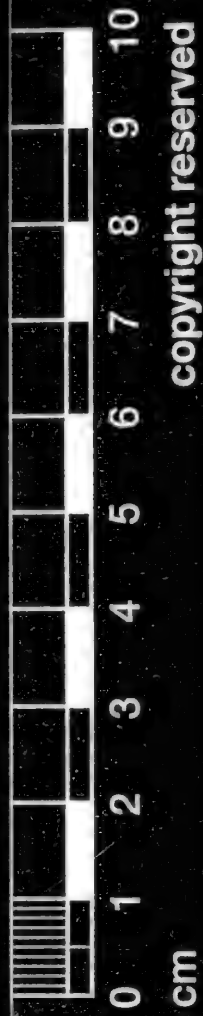
# Scorpaenidae

D. 12-9; A. 3-5; P. 12; V. 12; L. 12; T. 12.

The depth of the body is the  
 insertion of the ventral fin at about a  
 length of the total length. The caudal fin  
 about a third of the fish. The eye is sub-  
 circular, its diameter exceeding about four  
 times in the length of the head. The head  
 is furnished with a flat of white upper  
 dorsal. The hinder margin of the maxillary  
 is in a plane with the anterior border of  
 the eye. Aciculate teeth on the lower jaw  
 sides head, body, pectorals, and dorsal fin.  
 Two large ones between the orbits. The  
 dorsal as follows: one near front behind  
 the orbit, 3 or 4 the origin lateral line, one  
 opercle, one shoulder, a radiating one directed  
 forward near the upper lip, 4 on the side  
 4 or 5 on the preopercle. A small small  
 patch behind opercle a few on the upper  
 part of the opercle.

Dorsal fin has the third from the  
 tallest, granular. The 11th  
 11th is only half the height of the 10th.

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which seem to refer to the soft portion,  
the former is sharp (rather fine see drawing)

Body mottled with different shades  
of brown, sea color and dotted with dilute white  
reticulations and pale spots. Head deeper  
brown with minute pale bluish dots. In  
color pale pinkish, whitish, and, sometimes  
with brown sides pale greenish in the  
radiating brown bars. Spine dorsal olive  
green, mottled with darker. All the other  
fins brown to pale mottled with different  
shades of brown, whitish and red.

Length 4 inches

Male recently taken

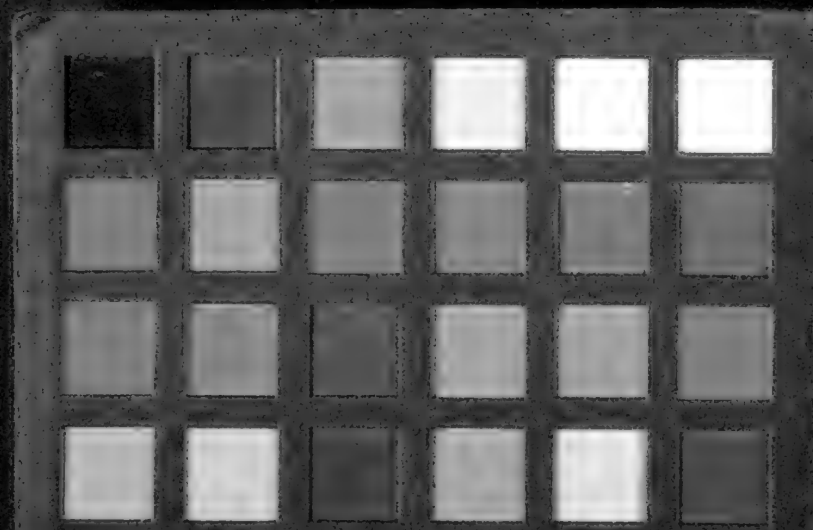
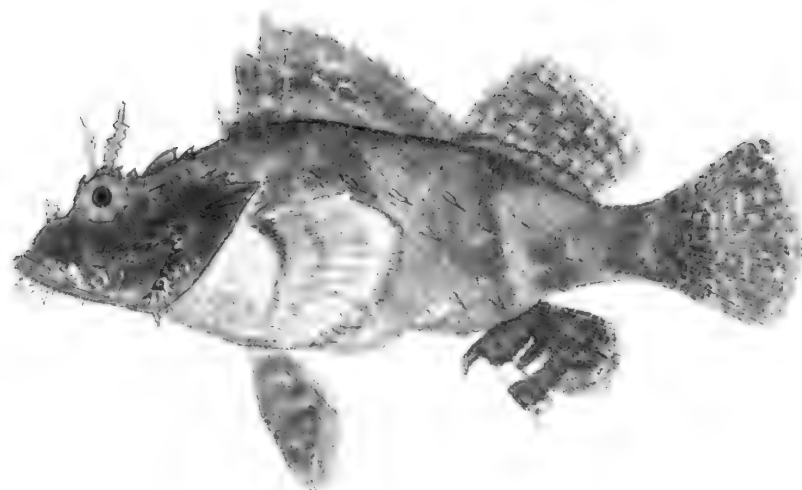


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*Scorpaena* sp.

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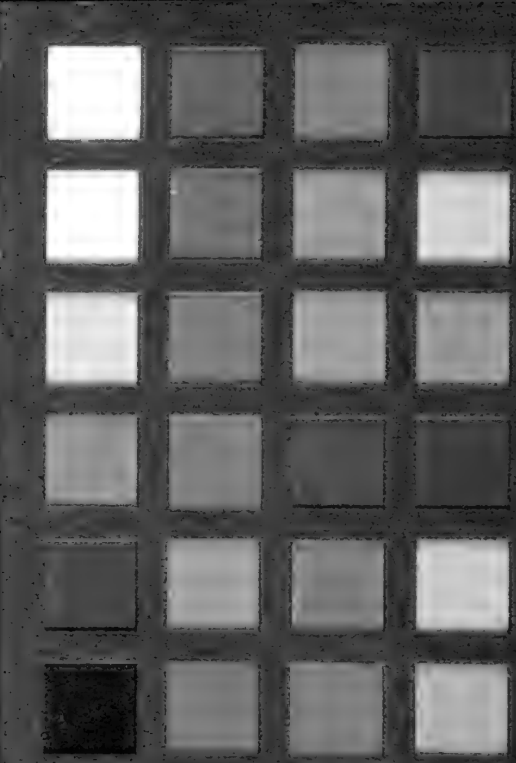
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*Scorpana* sp.

*Scorpaena punctata*, var. n.



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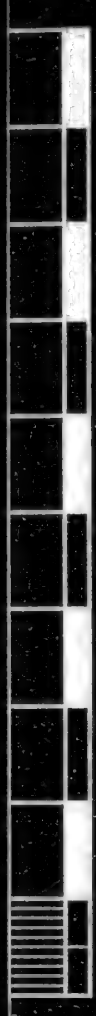


length, 10 inches

Habitat. Locality, etc.

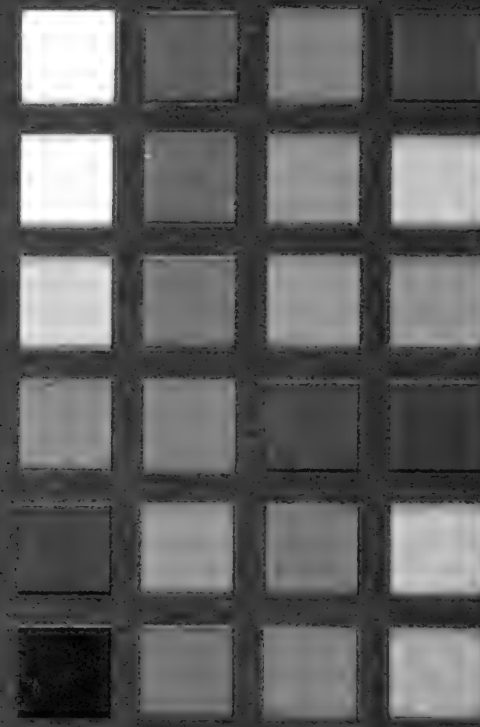
Remarks. This may seem to be a male specimen of the species. I am not sure. It is in the best of preservation, its colors. It is remarkable for the high, well arched spine dorsal and other fins.

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*Scorpaena* sp. sub.*Scorpaena nana*, nov. sp.

L. 7 2.12-4; A. 3-5; P. 1-2; V. 1-2; C. 1-2.

The head comprises a little more than a third of the fish and its greatest thickness is one-fifth of the total length. The head and of the maxillary reaches a little beyond the eyes, which latter are one-fourth the length of the head. The greatest depth of the body falls a little short of a third of the total length. Minute filaments may be observed on the body, and from dorsal fin a few larger ones on the sides, one of which are flat with darker margins, the upper posterior part of the body is white.

The dorsal fin takes its origin a few inches in advance of the hinder angle of the opercle. Its spring process is rather deep, strongly arching the rays approximate rather way, from the fifth to the eighth are the tallest.

Color pale greenish grey with large brownish cloud-like blotches and white freckles. The breast is marked with black. Ventrals are pale, brownish with brownish and greenish-yellow. The external half of the sides are greenish yellow later with brownish bronze and then in a

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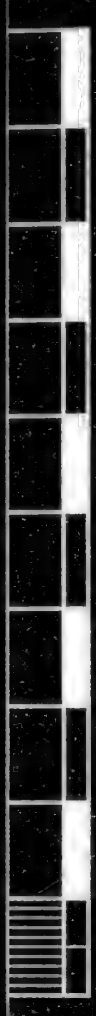
half is silver. The dorsal, anal and ventrals  
are pale, with more or less innumerable  
mottling. Caudal and pectorals pale with  
their rays spotted with brown.

Length, 1 inch.

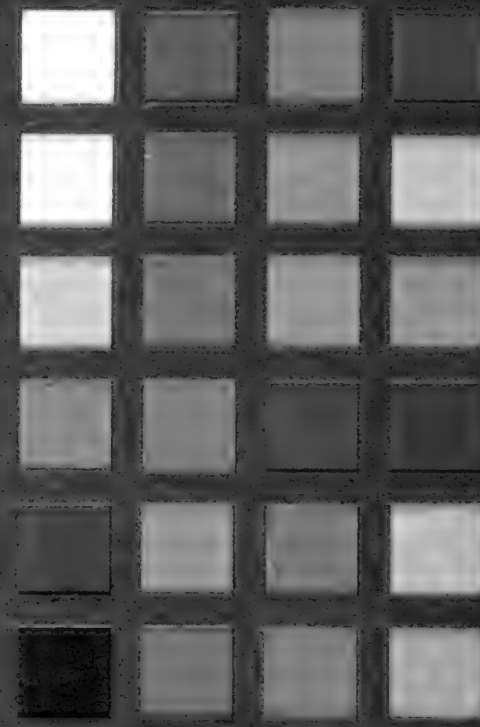
Habitat: Brazil, etc.

Remarks. - This little species in  
the shape of its spiny dorsal is intermedi-  
ate to *S. umbilosa* and *S. punctata*.

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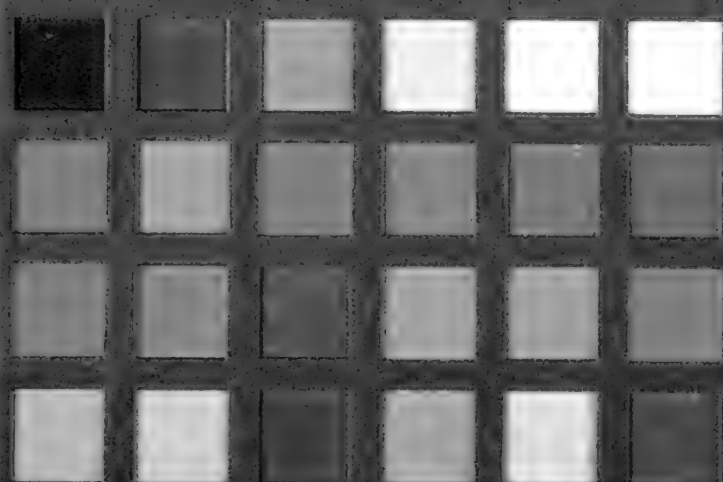


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*Scorpaena* sp.

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solitarius - mundaTherapsid - quadratus, quadratus.

3.75 Length of the body, 1.50 length of the

The head comprises a fourth of the total length, is about equal to the greatest depth of the body. The snout is short, is much shorter than the head, is about equal to the depth of the head, is pointed. The dorsal fin is large, is about one fourth of the total length, is pointed. The pectoral fins are rather small, are about one fourth of the total length, are pointed. The pelvic fins are small, are about one fourth of the total length, are pointed. The anal fin is small, is about one fourth of the total length, is pointed. The caudal fin is small, is about one fourth of the total length, is pointed. The snout is short, is much shorter than the head, is about equal to the depth of the head, is pointed. The dorsal fin is large, is about one fourth of the total length, is pointed. The pectoral fins are rather small, are about one fourth of the total length, are pointed. The pelvic fins are small, are about one fourth of the total length, are pointed. The anal fin is small, is about one fourth of the total length, is pointed. The caudal fin is small, is about one fourth of the total length, is pointed.

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A small skin occupies the space between the two nasal apices, from the anterior end of the nasal bone, extending upwards on the <sup>hinder occipital</sup> ~~temporal~~ region, and to the origin of the lateral line, and one on the simple, at horizontal distal end, a transverse line across the cheek.



third branch, which is the longest reaches nearly to the middle termination of the anal base. The upper rays of the pectorals are shaped very much like the strong dorsal, the rays being very long, reaching far beyond the base of the caudal, and the lower ones which gradually become shorter terminate in the filament.

Color blackish brown. Mouth marked with numerous sub-vertical ridges on the upper lip which bifurcate upwards on the dorsal fin. Posteriorly the slopes are dotted with opaque white. Sides blackish, micromaculate with close, sub-vertical reddish lines, which more or less bifurcate downwards. Dorsal oblique ridges on the breast. Spiny dorsal deep brownish black, with base somewhat broad, caudal anal bases thin rays articulating with deep brown and amber-yellow, the latter unarticulated between the rays with round deep black spots, and the basal portion which is longer blackish-brown is dotted with opaque white, ventral and pectorals deep blackish-brown, the former dotted with opaque white.

Length, 5 1/2 inches.

Habitat. Society Is.

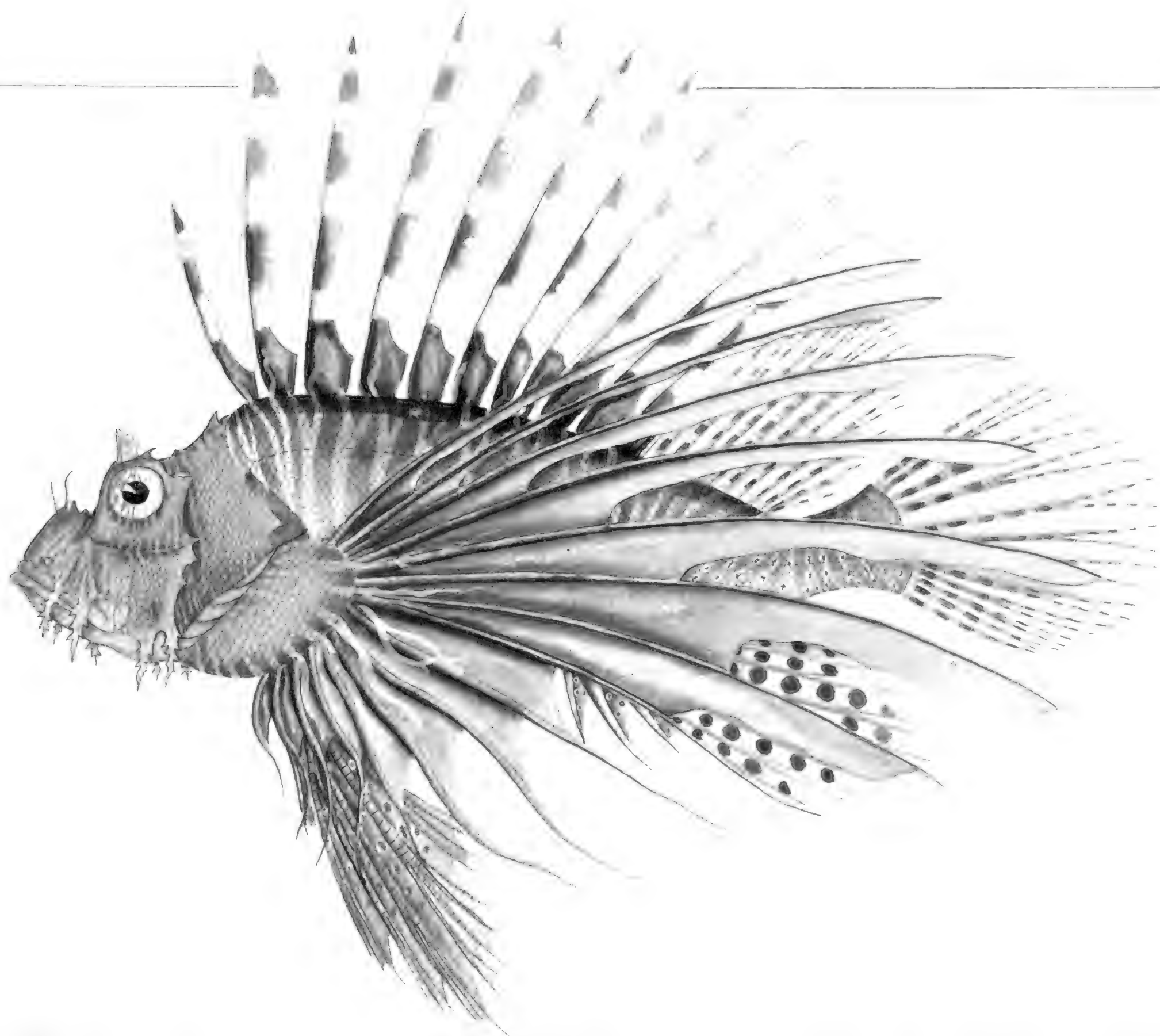
Remarks. I have seen but a single specimen of this exceptionally rare fish.

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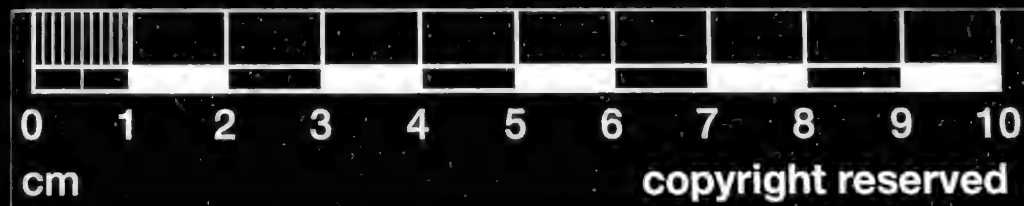
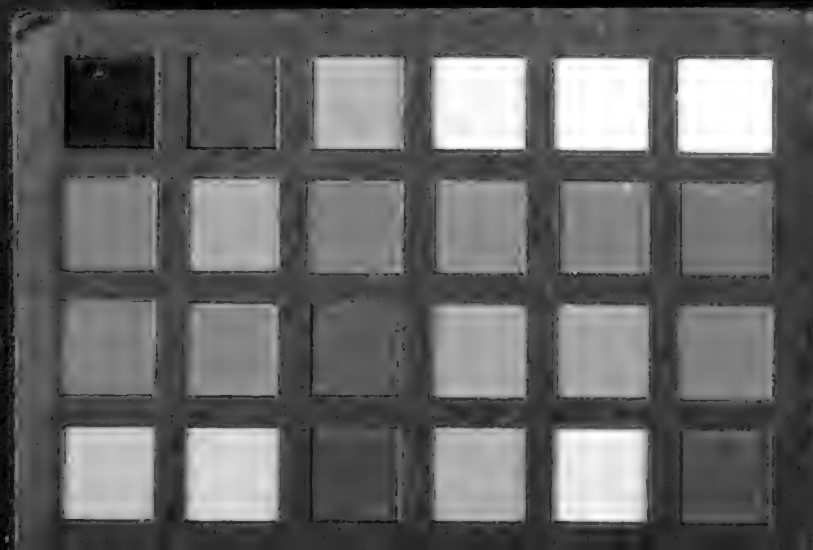


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*Pterois volitans*





*Meris, uncin.*

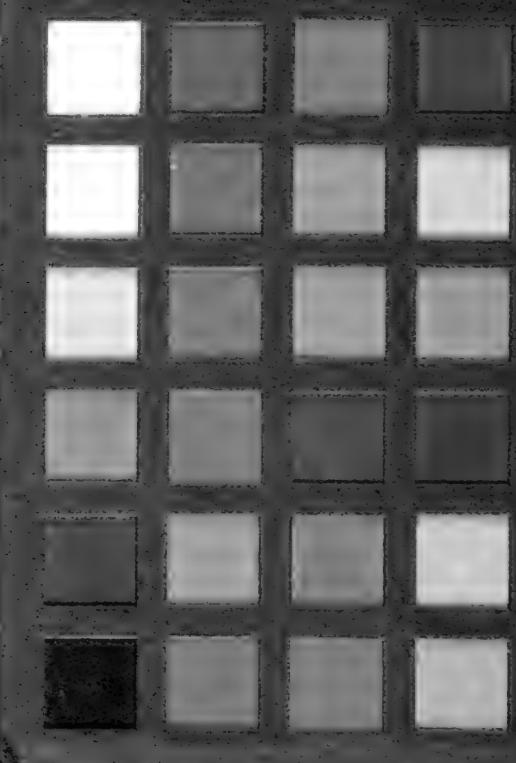
Form oblong, sub-cylindrical, compressed.  
 Teeth small, extending over the base  
 as far as the snout. Max. sub-cylindrical,  
 variously curved and provided with in-  
 ternal appendages. The lower; this also  
 elevated above the line of jaw. Mouth  
 with a moderately deep gape, which is oblique  
 in its outline. Teeth irregular, granular,  
 or villiform, disposed in bands, and smaller  
 ones in the lower. Canines bent upwards.  
 The two dorsal are more or less united;  
 the spinous portion more than twice the  
 length of the soft, and compressed, scaly,  
 slender rays, which have slender, sub-  
 membrane divided rays to the base of the  
 pinn. The caudal bent a little upwards,  
 the pinn. is large, and somewhat forked. The  
 vent. and anal are long, pointed, or bifid.  
 Anal deeper than the anal, and shorter more  
 in advance of the caudal than the soft  
 dorsal. The ventral and anal are very  
 long. The latter is more in advance than  
 their anal. Anal is more or less slender,  
 filamentous.

The pinn. are remarkable for their  
 long dorsal spine on <sup>the</sup> ~~the~~ ventral rays.

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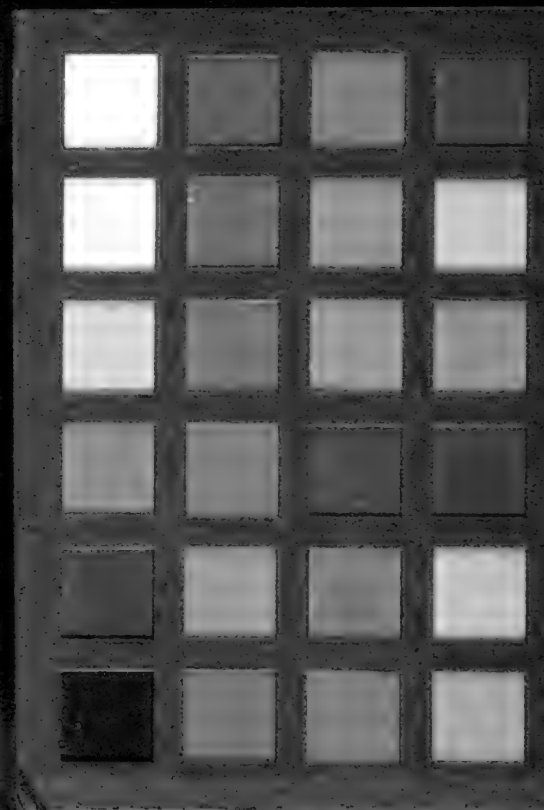
Salix, sp.

*Meris ~~undulata~~*, Stock



ventral. Both small, numerous, scattered, fine  
granular, long slender, prominent in the  
superior part of each side, which are about  
half the length of the body. There is a matter  
one near each ant. in most species, and  
several others in the same half of the body.  
The upper portion of the ant. is fan-  
shaped and a range of numerous fine, ex-  
posed on the eye to the margin of the lateral  
line. A pair on each side of the nose, the  
smaller and the larger of which are at the  
ridge between the cheek and extend to  
the forepart of the eye, which latter is some-  
times several species, some of which are shorter  
than the others, the latter sometimes the  
smaller. The minute in some species, cov-  
ered with a membranous plate.

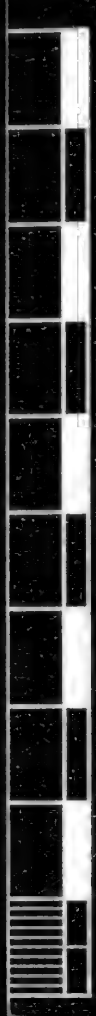
The dorsal fin takes its origin mid-  
way between the eye and the termination  
of the opercular process. Its first  
spine is longer than the body, but as the second  
which is the longest, is smaller, in its length  
about one third the length of the first.  
The length is about two thirds of the body.  
The ninth, the eleventh which is not more than  
half the length of the first, is in the same  
proportion to the length of the first as the  
ninth. The depth is just as much as the  
eleventh and is not longer than



a hole of it is kept by membrane to the soft  
 dorsal fin which is situated in the middle of the  
 fin, the soft dorsal is connected with the upper  
 margin, since the middle rays are latent,  
 which extend the length of the body, but  
 not more than half the length of the ventral  
 spine. The anal commences at a point op-  
 posite to the first articulated dorsal ray, &  
 its lower margin is rounded and the fin  
 is deeper than the corresponding one above.  
 The large ventral are acute, and when laid  
 back their tips reaches vertically a fin  
 or the first soft ray of the anal fin, the  
 anal articulated ray is the longest, being  
 twice the length of the anterior spine ray.  
 The caudal is articulated two-thirds of the  
 whole length of the pectoral fin, but its rays  
 are undivided and pierce the fin by their  
 thin membrane, since their slender pro-  
 cesses the upper one reaching far back  
 to the middle margin of the caudal, the  
 lower one slightly diminishing in length.

The body and peduncle upper portion  
 of the head is brown, green beneath and  
 behind. The lower part of the head pale  
 yellow or pink color and the anal gener-  
 ally dusky with a light or testaceous  
 The side of the body is ornamented with  
 six, more or less vertical narrow white

NATURAL  
 HISTORY  
 MUSEUM



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is pinkish white, which has a dusky mar-  
 gine and are mostly present above and  
 beneath the dorsal fin and on the pectorals.  
 Two similar horizontal ribbons on the can-  
 dal trunk, and two on the head, both  
 passing through the eye, dorsocaudal and back-  
 wards over the gill cover and the pectorals  
 one is forked just beneath and behind the  
 orbit, the pincer branch passing over the  
 nape. The <sup>upper</sup> surface of the orbital tentacles  
 are crimson and the outer branch the nasal  
 appendages the former color. The dorsal  
 trunk is enclosed by the ribbons passing  
 through the eye.

The spinous dorsal rays are pinkish-  
 red and the membrane reddish brown.  
 Soft dorsal, anal and caudal have color-  
 less membranes and pink rays, a faint  
 web with brown, antebell deep brown, with  
 carmine rays. Ventrals brown with fine  
 crimson-red rays.

Length, 2 inches.

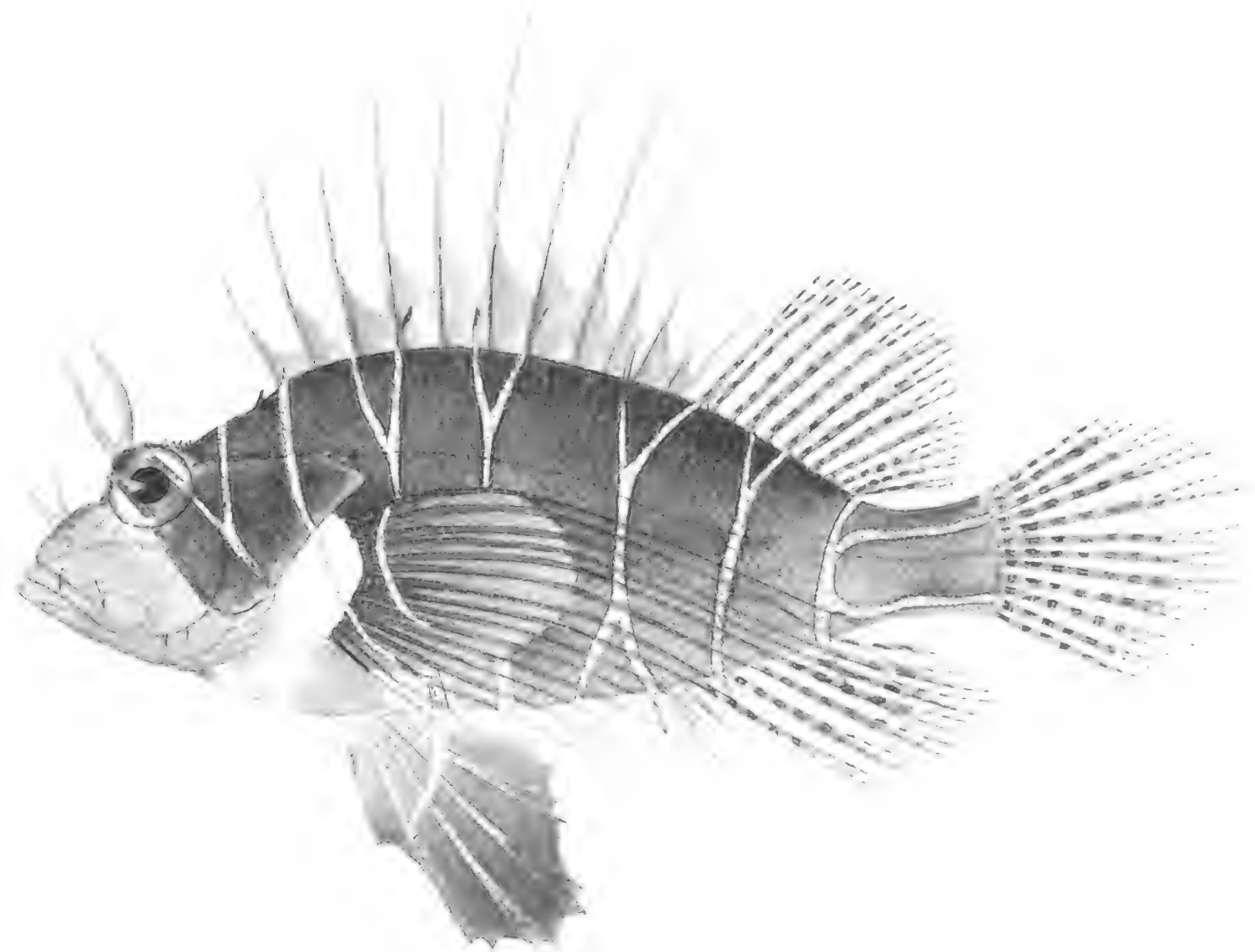
Habitat: Beche, St. George, all the  
 Peninsular, Amazon, Rio, New Guinea,  
 East Indies.

Remarks: At the present location  
 this beautiful fish is called "Bu-tu-ra-i-han"  
 because from their spines are much de-  
 rived by the natives.

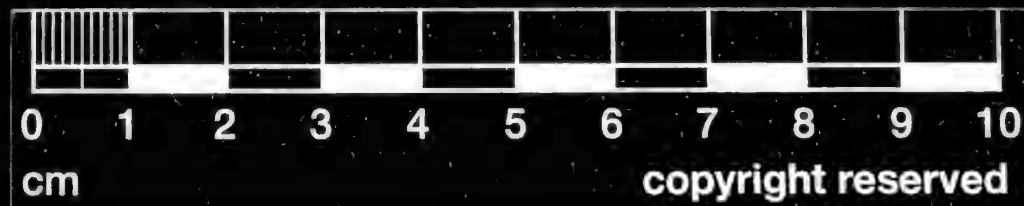
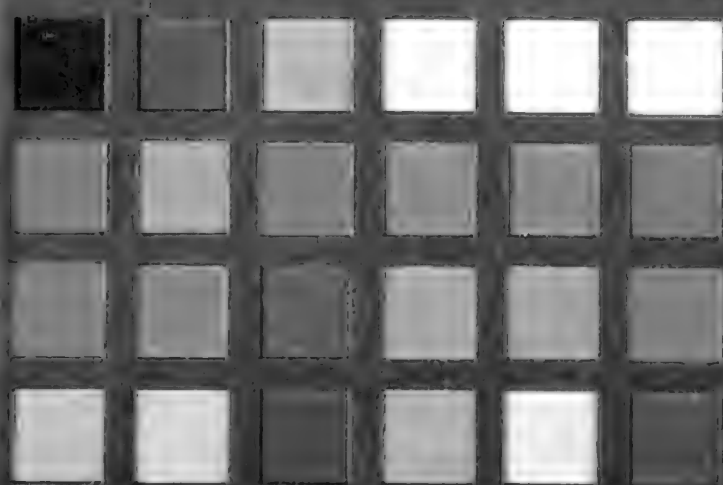
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*Pterois volitans*





*Amia tenuianalis, Cuvier.*

From oblong body, more compressed;  
the body rapidly tapering from the  
head, but forming a more uniform line  
naked, with minute scales and a  
small large, with a deep purple, caused by  
spines and together with the other part  
provided with cutaneous glands and pinnules.  
The opercle above the line of purple,  
with a deep concave space between them.  
Mouth very obtuse, with numerous small  
canines, branched light rays above. The dorsal  
fin is very high and much in the caudal.  
The spine portion, which is much longer,  
longer than the soft part, and more numerous  
above the opercle, not so numerous below, and  
caudal. That below is its base than the  
soft part of the dorsal, not so deep and more  
distant from the caudal than that from the  
ventrals are beneath the pectorals, but small.  
Pectorals very broad, rounded behind, and the  
rays are simple, but articulated.

These fishes may be known by their  
strongly compressed bodies and high  
dorsal fin.

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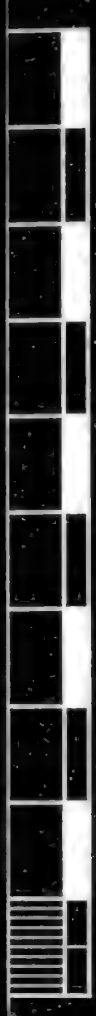
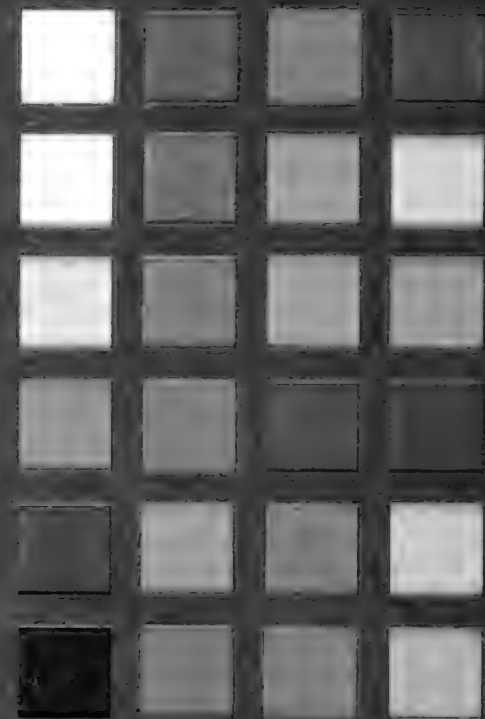
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cm

*Janianus triacanthus**Janianus pilamensis*, n. sp.

L. 7; D. 12-14; H. 6; W. 1.5; T. 1.5; C. 1.5.

The greatest depth of the head below beneath the fifth spine of the dorsal fin is half the total length, caudal included. The greatest thickness is greater than that of the greatest depth. The head comprises one third of the length. The eyes are small, and their diameter is less than five times the length of the head. Two sensory spines may be seen on the superior crest of the orbit, one in a nasal region, the approximate one on the occipital process, one at the angle of the lateral line, two on the upper margin of the operculum and two radiating upwards on the opercle which have into them a series of longitudinal red-colored lines which terminate in two spines. The angle of the preopercular window tips of the maxillary reaches as far back as a vertical line touching the anterior end of the orbit. Denticulated cartilage may be observed along the lower line of the opercle and on the nasal bone and between the upper and lower short filamentous may be found above the corner of the lateral line. The ventral fin has one spine each of the dorsal fin.

NATURAL  
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The dorsal fin last year a point just above the lower limit of the scales. The second spine is the longest, being about one-fifth the total length of the fish; the first is about the same length as the tenth. The soft part of the fin is a little deeper than the last spine, rays are unpaired, less than a third.

The whole length of the pike is deeper than long, and rounded at the base. The height and length of the anal are about equal. The anal fin is set back as far back as the third soft ray in the anal fin. The rays of the ventral are bispine.

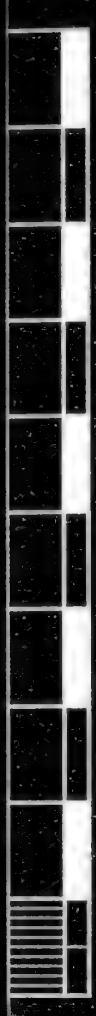
Color light greenish-yellow, with here and there pale mottling, red shades, and even some purplish, punctures with white. Sides light greenish-yellow, with an inner ring and radiation reddish line. The same as the upper with mottling. The extreme posterior is a white spot with deep black.

Length, 1/2 inch.

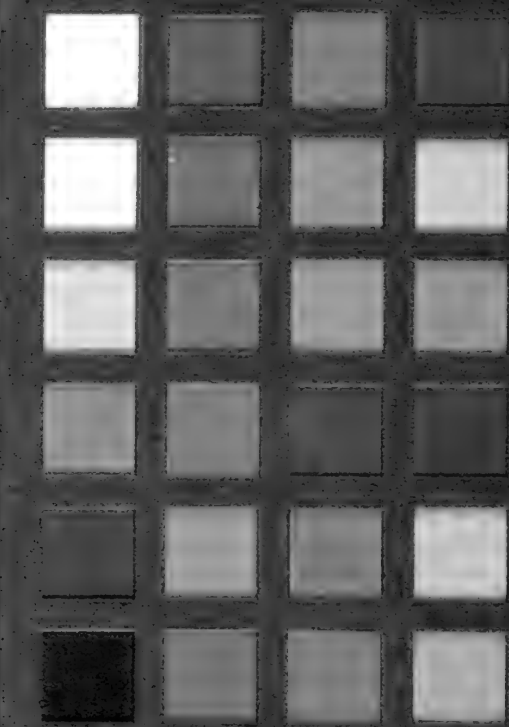
Habitat. Deep. etc.

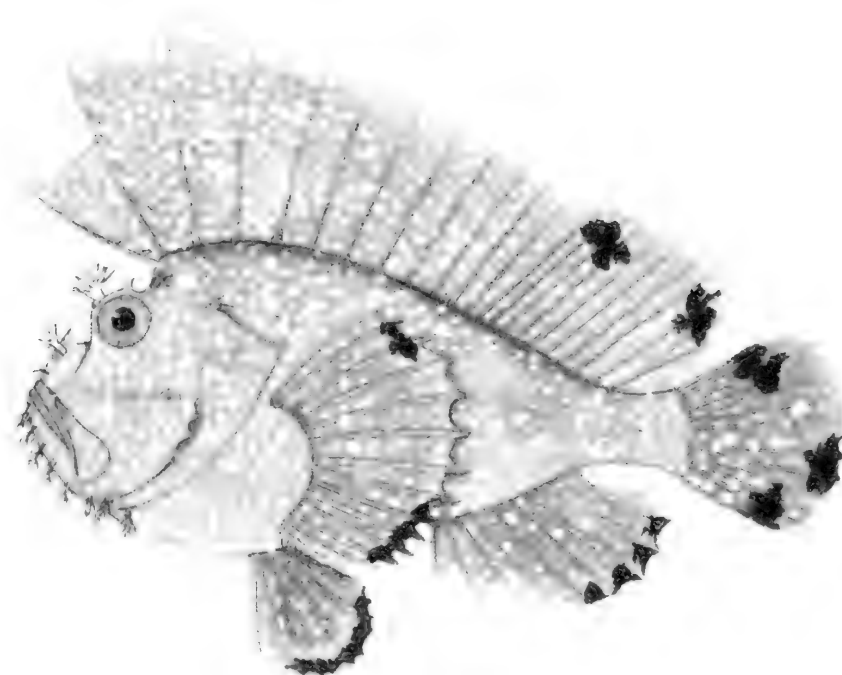
Remarks. I caught a single specimen of this species in the pond in a rock pool.

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MUSEUM

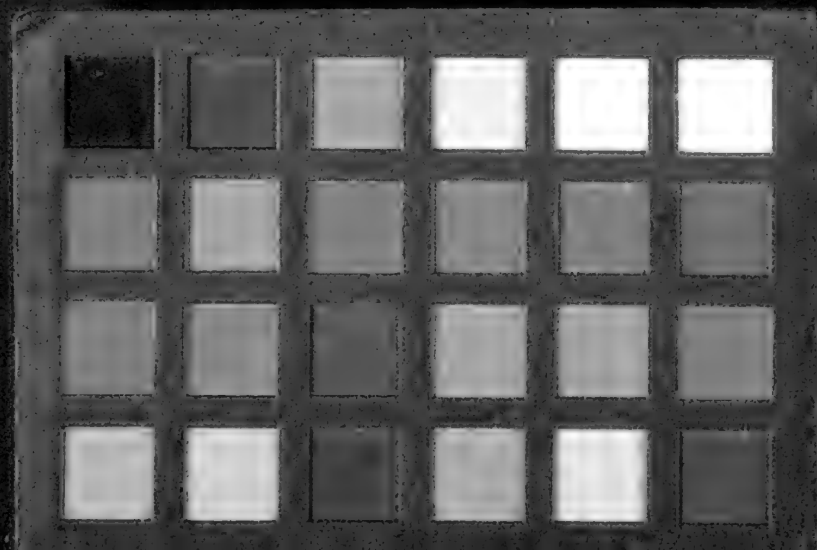


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*Taenianotus triacanthus* 59





*Tanius garretti**Tanius garretti* Lundquist, 1911.

P. 7; 4.11-12; 0.5; 0.15; 1.15; 1.15; 1.15.

Color of head with deep olive green. Head and belly dusky green and dark dotted with white. A light mottled with dusky, white and brownish on a light reddish ground. The anal fin is speckled with white and margined below with saffron, which is irregularly spotted with white. Ventrals a deeper red than the body and margined posteriorly with saffron. The caudal is marked across the middle by a vertical dusky bar and speckled with white.

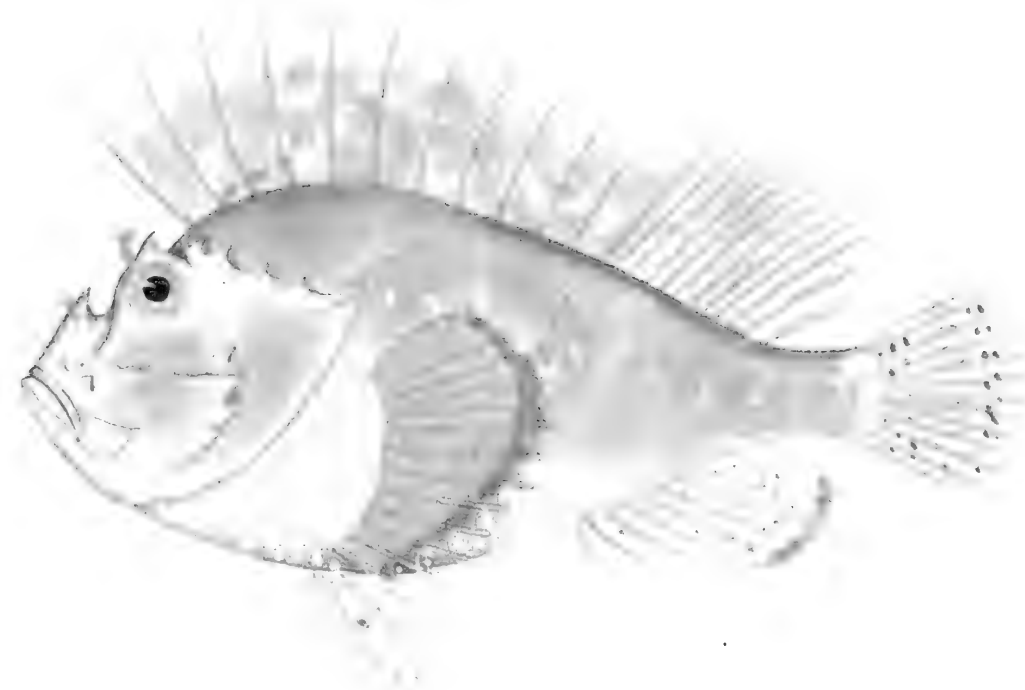
Length, 1 inch.

Habitat - Swedish sea.

Remarks - The very rare fish, of which I have seen but a single specimen, was sent to me, corresponding before I could draw up a description.

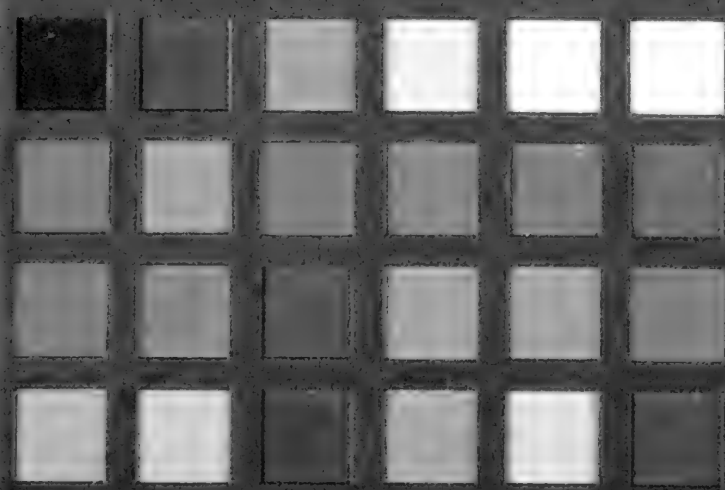
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*Taenianotus garretti*

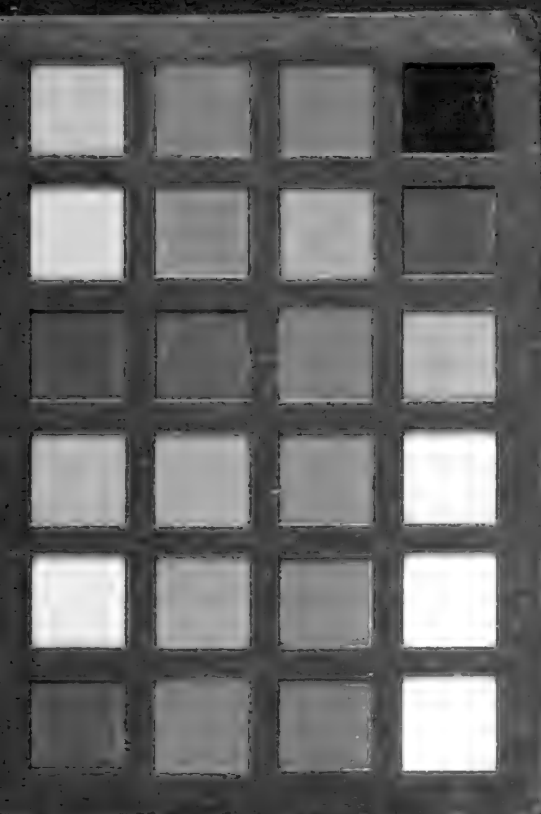
61





now when nearly the same

\_\_\_\_\_



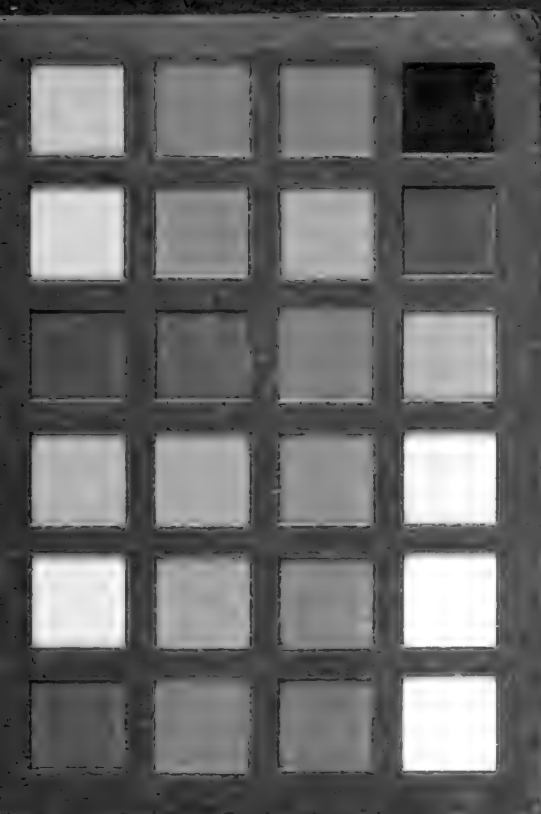
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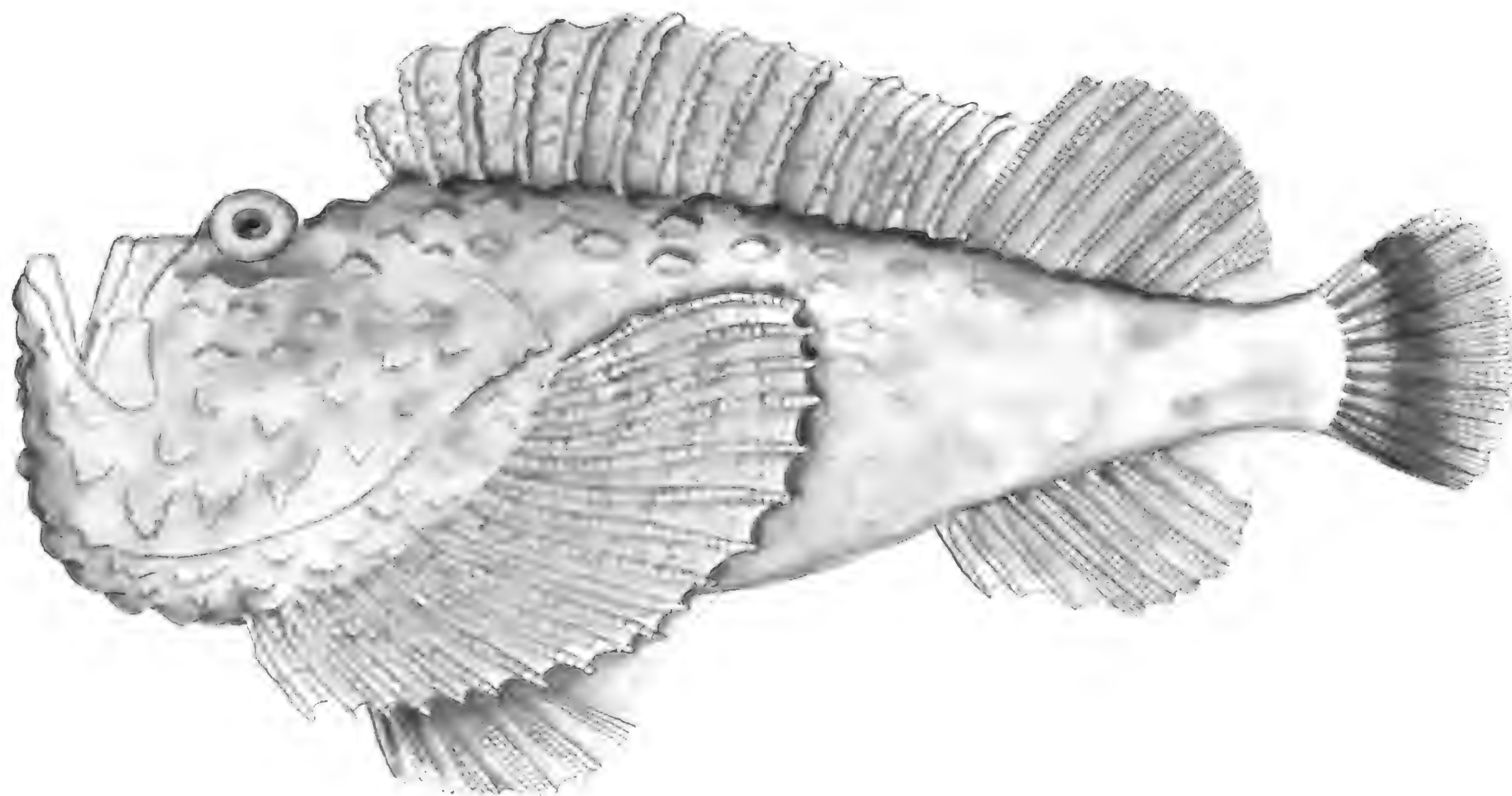




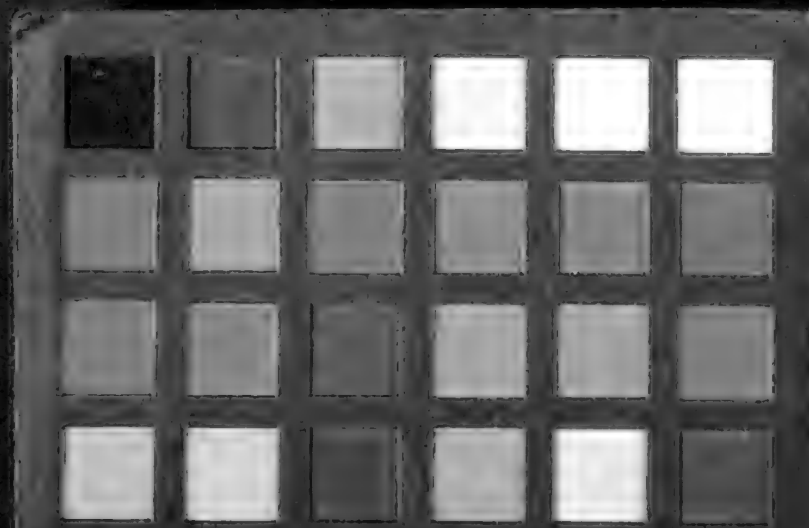
**NATURAL  
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[illegible]





*Synanecia verrucosa*



*Micropus maculatus*

Genus 1. No. 1.

The singular fork is black.  
 a number of small black spots of the same  
 colour as the fork are scattered

over the body. The other large  
 compression, the whole length of the body  
 of the fork, is black. The  
 of the fork is black, and is included in  
 the upper line of prolegs. The lower arch  
 than the lower arch, both converging at  
 the middle and converging to the middle  
 fork. The fork is a solitary, but  
 is marked with numerous minute dark  
 spots. The fork is black, and is  
 distributed over the whole body.

The head is large, obtuse, deeper than  
 long, comprising nearly a third of  
 the length of the upper proleg. The  
 is black, and is up to the middle of  
 the head. The head is black, and is  
 compressed, and is a little longer than  
 five prolegs. The head is black, and is  
 nearly as long as the upper line of pro  
 legs, and their diameter is less than a  
 half times the length of the head.

The interorbital space is less than  
 less than one diameter of the orbit.

The anterior nostrils are placed through  
 a tube, approximating each other close  
 to the eye. The tube is black, and is  
 transparent, and is in front of the  
 eye. The tube is black, and is  
 exceeding by an amount, a little longer  
 in radius. The tube is black, and is  
 is armed with a long, straight, flat  
 spine, which projects the tube forward  
 and backward, in front of which is a

NATURAL  
HISTORY  
MUSEUM0 1 2 3 4 5 6 7 8 9 10  
cm

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small tubercular teeth. The  
first pair is the first pair of the five or six  
pairs of the first pair of the larger  
minute tubercular spines. The larger  
minute tubercular spines are all, with  
a single exception, slightly curved spine directed  
backwards. The tubercular spines are in two  
small flat tubercular spines. The caudal  
fin is oblique to the axis of the body,  
the anterior dorsal fin is small,  
positioned very nearly above the  
beginning of the lateral line, and the third  
ray of the pectoral fin is the tallest. The second  
fin is oblique to the first, is longer  
in its base, but deeper, arched in  
the middle rays tallest, all  
rays beyond the interradial membrane  
and the supra anal fin.

The anal fin, which is opposite  
to the second dorsal, is of the same length  
or a trifle less, but not so deep as the latter  
fin and is of the same shape and structure.  
It is provided by two minute free spines.  
The ventral fins are rudimentary, consisting  
of minute spines and three soft rays.  
The lower fin is beneath the base of the pectoral  
fin. The pectoral are short, with short  
rays, fin rays projecting nearly a  
right angle with the body. The six  
upper rays are simple the eight lower  
are branched and articulated.

The caudal is small rounded.  
Length 11; depth 11; P. 3; P. 6-8; D. 3, 4, 2.  
Color grayish, dotted with brown.  
Sides marked with silver and brown. The  
faint dorsal and pectoral dots like the  
lateral.

Length 14 inches. - Society, Isl.

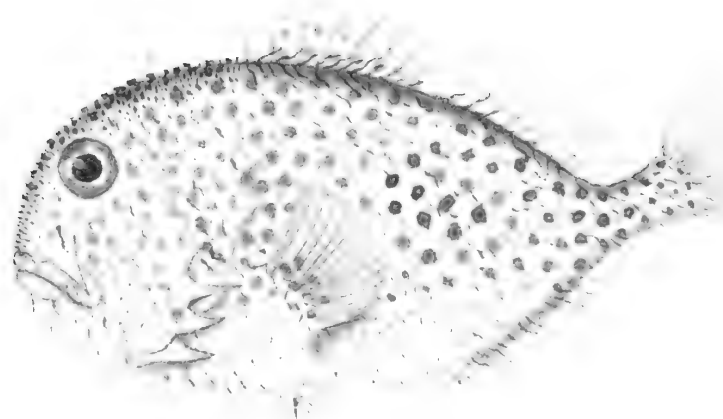


NATURAL  
HISTORY  
MUSEUM

113

129

*Micropus maculatus*



**N** NATURAL  
HISTORY  
MUSEUM



*Microgaster unipinna*

Genus? No 111

No. 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

This species which is closely allied  
and congenic with the latter, was also obtained  
in clumps of coral, and is a small example  
before me in its natural state. The body is  
very slender, and the head is large.  
The general shape and structure of the  
body is the same as No 113.

The two dorsal fins are united, the  
first more developed than in No 113, but  
all the other fins nearly similar to  
that species.

Length 1 inch.

No. 114.

NATURAL  
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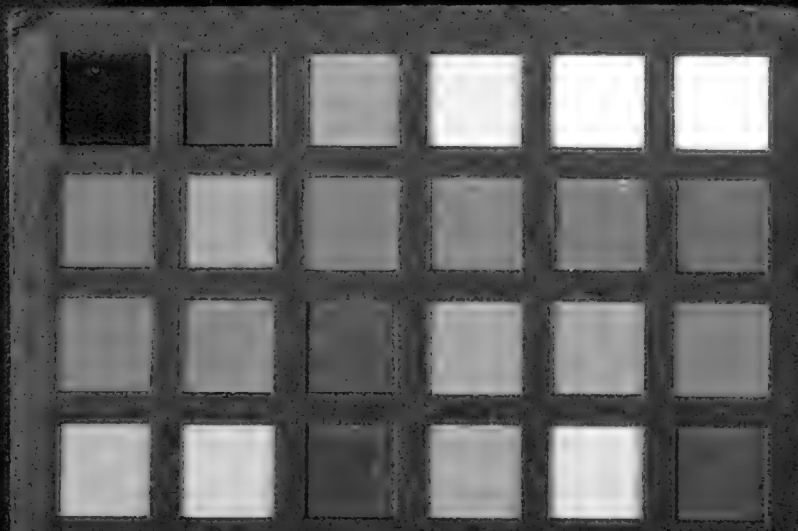
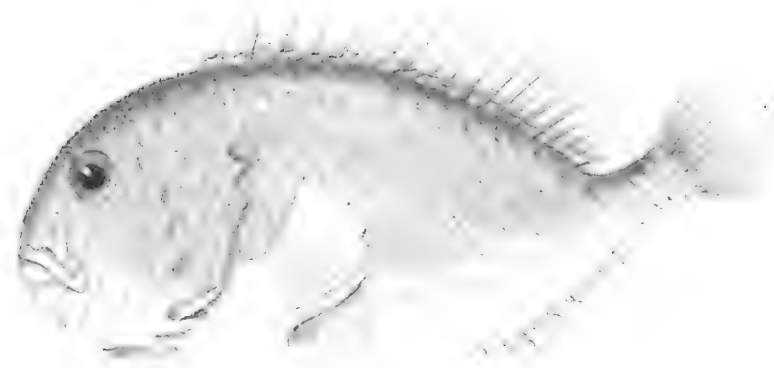


0 1 2 3 4 5 6 7 8 9 10  
cm

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*Micropus unipinna*

114  
130





*Plesiops corallicola**Plesiops* *novus*

No. 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

The upper and lower jaws are well  
arched, and the greatest depth of the head  
is about equal to the length of the snout  
which latter can just be seen in the  
slight depression immediately above  
the preopercle. The opercle is  
circular, inserted so that the snout is  
even or rising a little above the upper  
line of the opercle, and their greatest diameter  
equals about one-fourth the length of  
the head. They are separated by an inter-  
ocular space equal to half the diameter  
of their own orbits. The hinder tip of the  
maxillary extends posteriorly as far as the  
hinder limit of the orbit. The preopercle  
is rounded and has a narrow border.  
The enumeration is to 11 horizontal rows of  
scales on the side of the body, four in  
anterior row on the cheek, a single large  
one on the inferior part, and the  
scales on the opercle are larger than those  
on the body. The lateral line runs  
upward and runs close to the back  
as far as the end of the snout from  
where it evidently begins, but com-  
mences again on the median line  
above the origin of the snout fin and  
runs straight to the tail.

The dorsal fin commences  
at a point immediately above the hinder  
corner of the opercle, and gradually in-  
creases in height as far as the fifth  
branched ray, where it  
decreases in height.

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Part of the fin an acutely angular outline  
The whole fin extend over a base equal  
to half the length of the fish, caudal  
excluding, and the soft portion when  
beaten down extend a little beyond the  
base of the caudal.

The anal fin takes its origin be-  
neath the insertion of the dorsal spine and is  
preceded by three small granular  
spines. The soft portion is shaped  
much about the same size as the soft  
dorsal but terminates a trifle in advance  
of that fin. The very long ventrals are  
narrow and when laid back their tips

reach to the commencement of the  
anal fin. Their small anterior spine  
is less than a third as long as the  
ventral. The dorsal rays which together  
with the first is distinct, are not divided  
into branches and have their inter-  
radial area broad deeply notched.  
The caudal occupies one-fifth the  
length of the fish and the pectorals  
about one-sixth.

The ground color of this beautiful  
species is brownish, the throat and  
belly, violaceous and each scale on  
the body is ornamented by an oblong  
vertical blue spot. The upper hinder  
portion of the head spotted with soft  
green and large bluish green spots  
along the lower line. Several large  
blue spots, margined with reddish  
brown on the opercular pieces, and  
the branchiostegal membranes lined  
with a bluish green color.

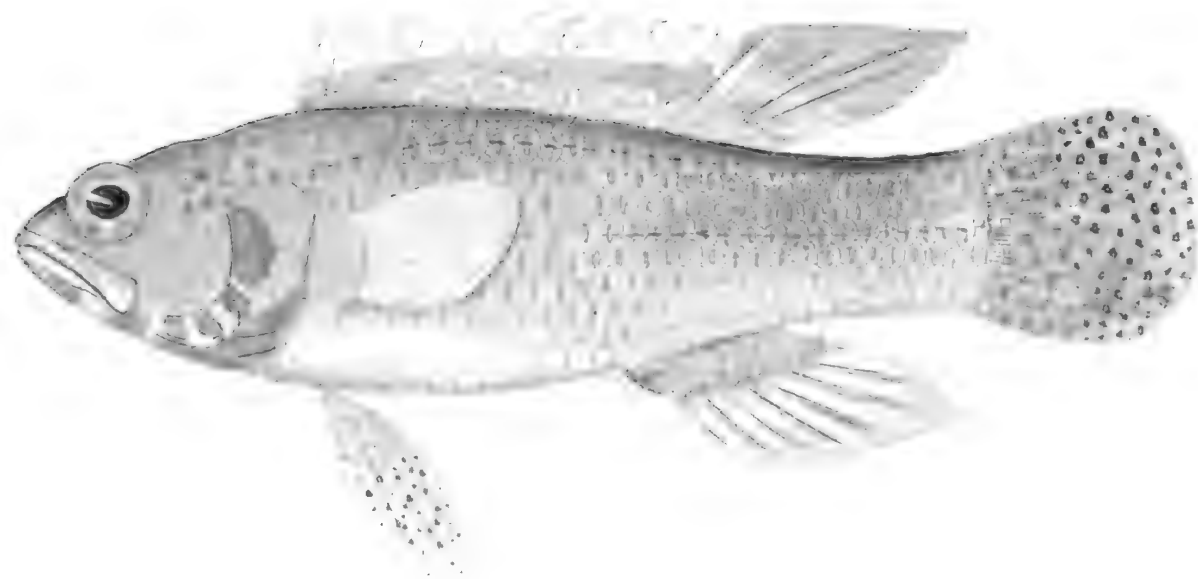


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HISTORY  
MUSEUM



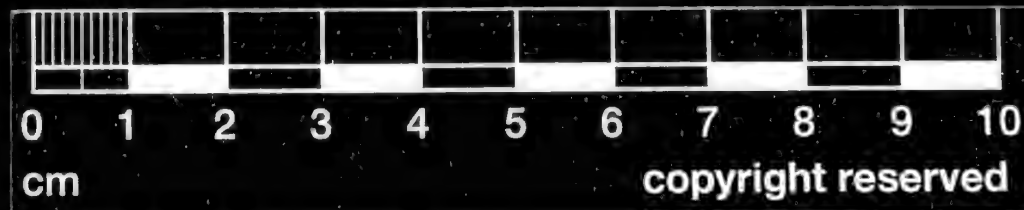
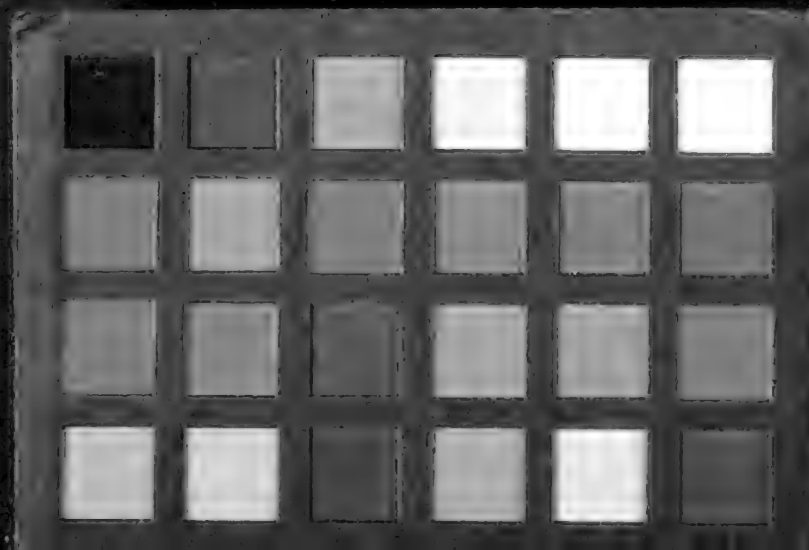


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*Plexipops corallieda*

324



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MUSEUM



*Leucis striolata*

Signatures No 76

1.2

On 10, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 87

The first one is still in the 9<sup>th</sup>, but sleeping, the emigration bet on the 10<sup>th</sup> does not occur, so during the night we were woken and the candle is nearly full.

Color above brown passing into bluish green on the lower thorax, and the upper two-thirds of the tail decorated with closely set blue & gray semicircular lineations. The head with similar lined irregular small oblique patches. The lower third of the body with smaller irregular spots and lines of an olive brown color. Venter superior white, yellow and brown. The lateral feet number varying from eight and anal and caudal feet number 10. Length of the horn 6 or near 8 ft. In the last stage the spinning portion of the cocoon, and immediately prior to the chrysalis.

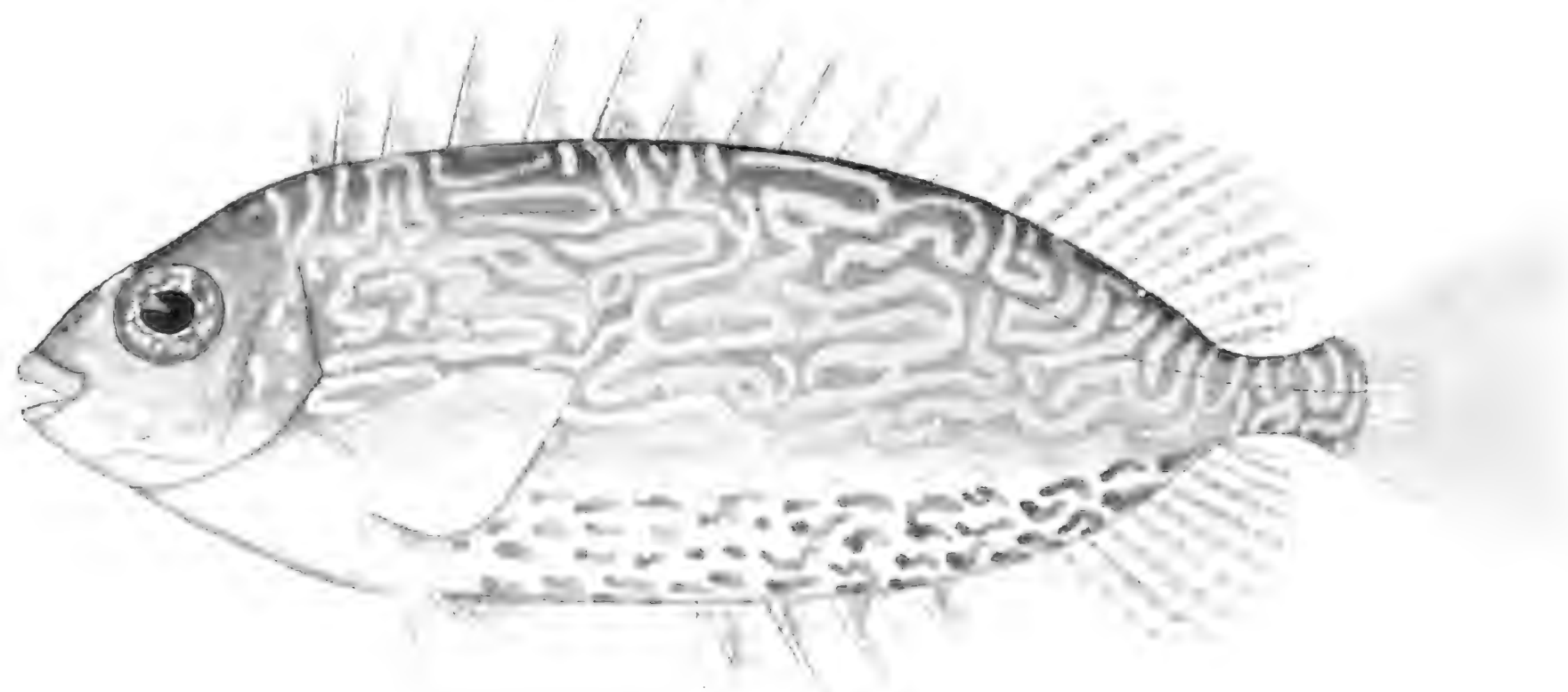
Length 10 inches.

Hab. - Loc. 4, 24.

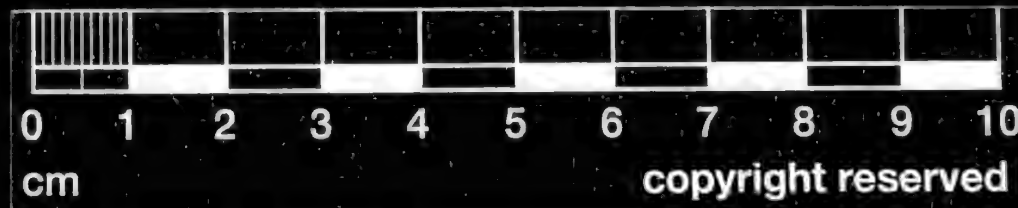
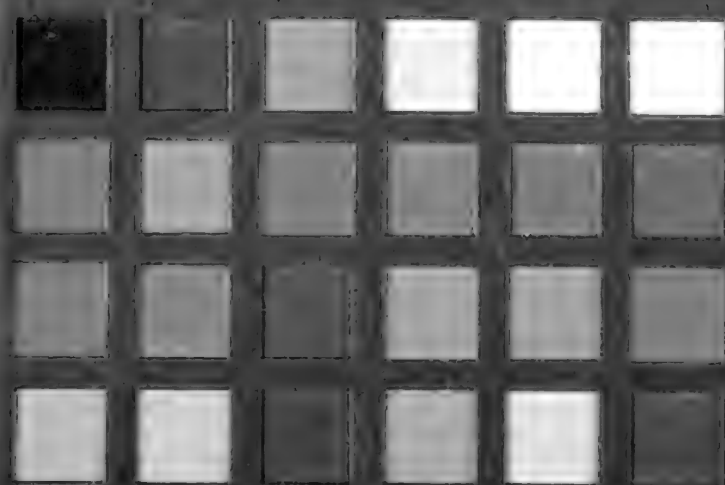
Na tpe nam, da čez tvevanje



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*Teuthis striolata*



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*Teuthis rostrata*

fig. 1000. 1000.

$\Sigma$ , 1, 1, 10, 10, 12, 9, 11, 3, 1, 1, 1, 6, 4, 5, 1,

The species is not very common in the north, the greater part of us is referred to the total length of the body, the head which is the proportion of the body, and the length of the body, the head is excluded in the measurement. The head is larger eyes are four times the length of the body of the head of the body.

The *Serphid* was supposed to be the same as 97, but the *Serphid* at present is right. The *Serphid* is also similar to the latter species.

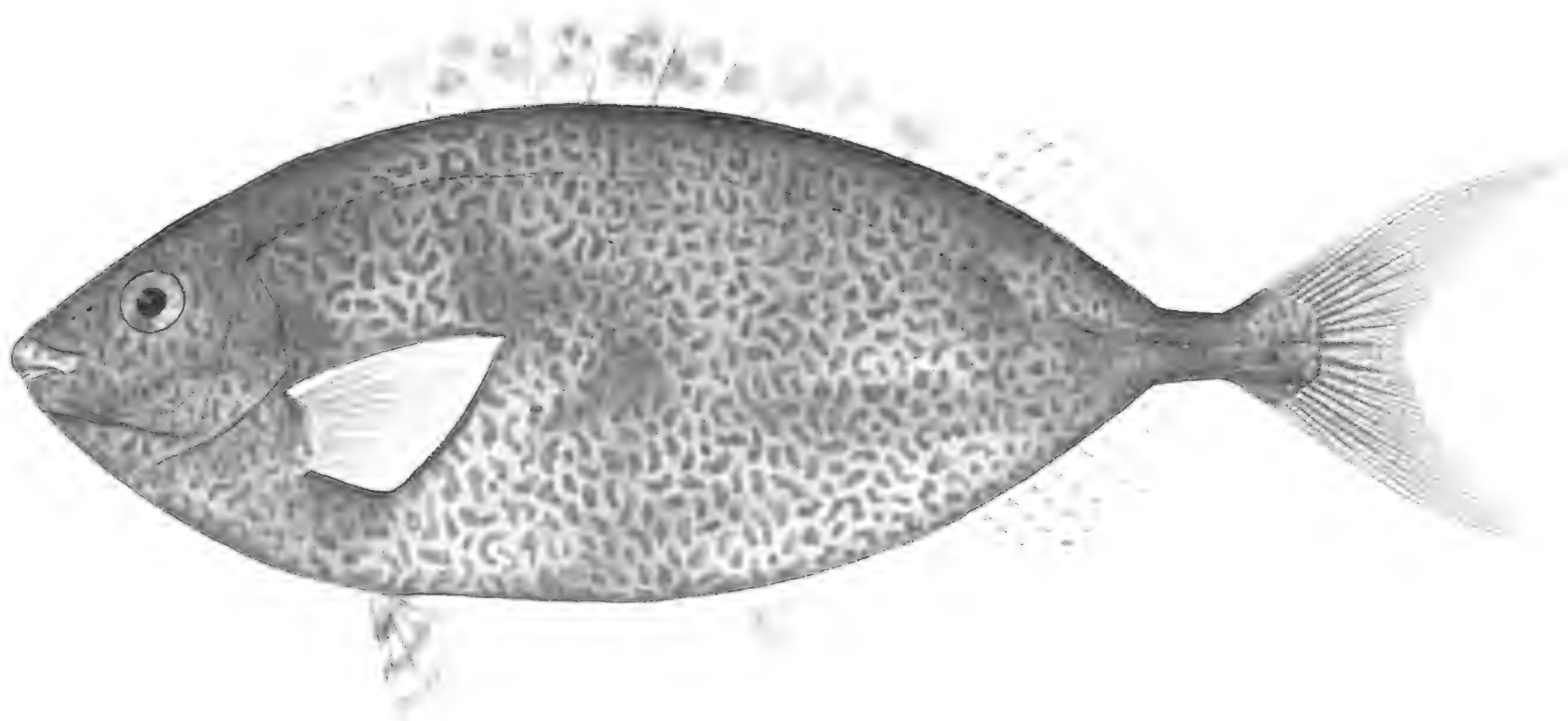
A border of the lining fish scales  
 with purple brown on the outer side  
 head and body is clothed, mottled with  
 small amber yellow spots, such as  
 of irregular shape, many blue, curved  
 on, sometimes serrated, other more  
 silver and brown, the dorsal fins small  
 smoky blue, there is a fine green line  
 clothed with brown on the left side  
 with or without trace of other colors very  
 light straw yellow, sometimes a blue  
 cloud with brown cloud dusky, light  
 or olivaceous.

Length 7 in. head

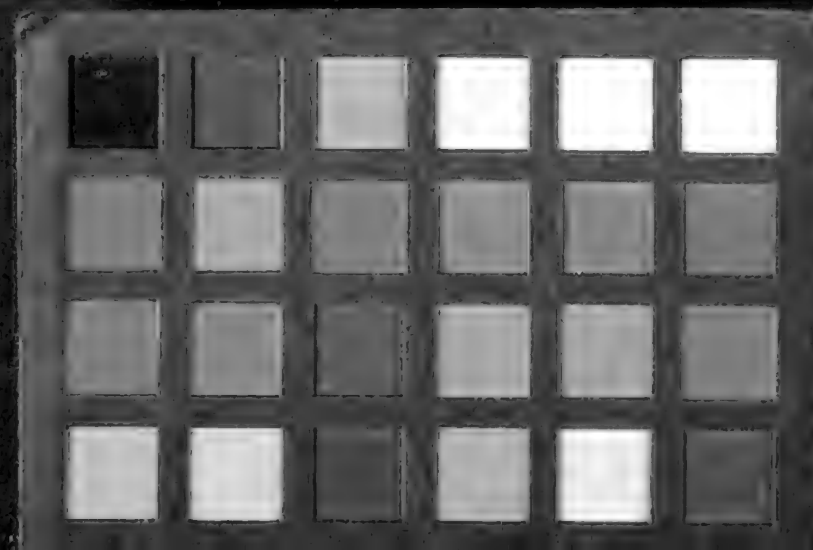
Hub. Christy, Pa.

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1 1/2"



*Thalassoma rostratum*



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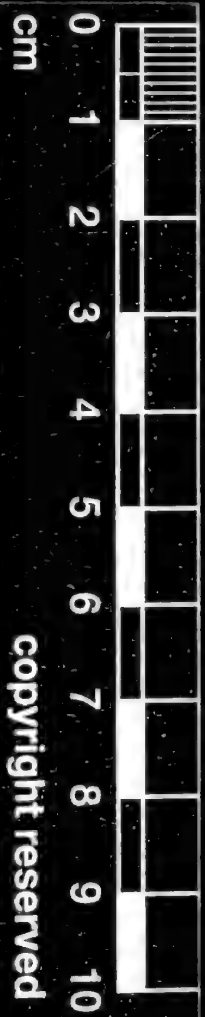




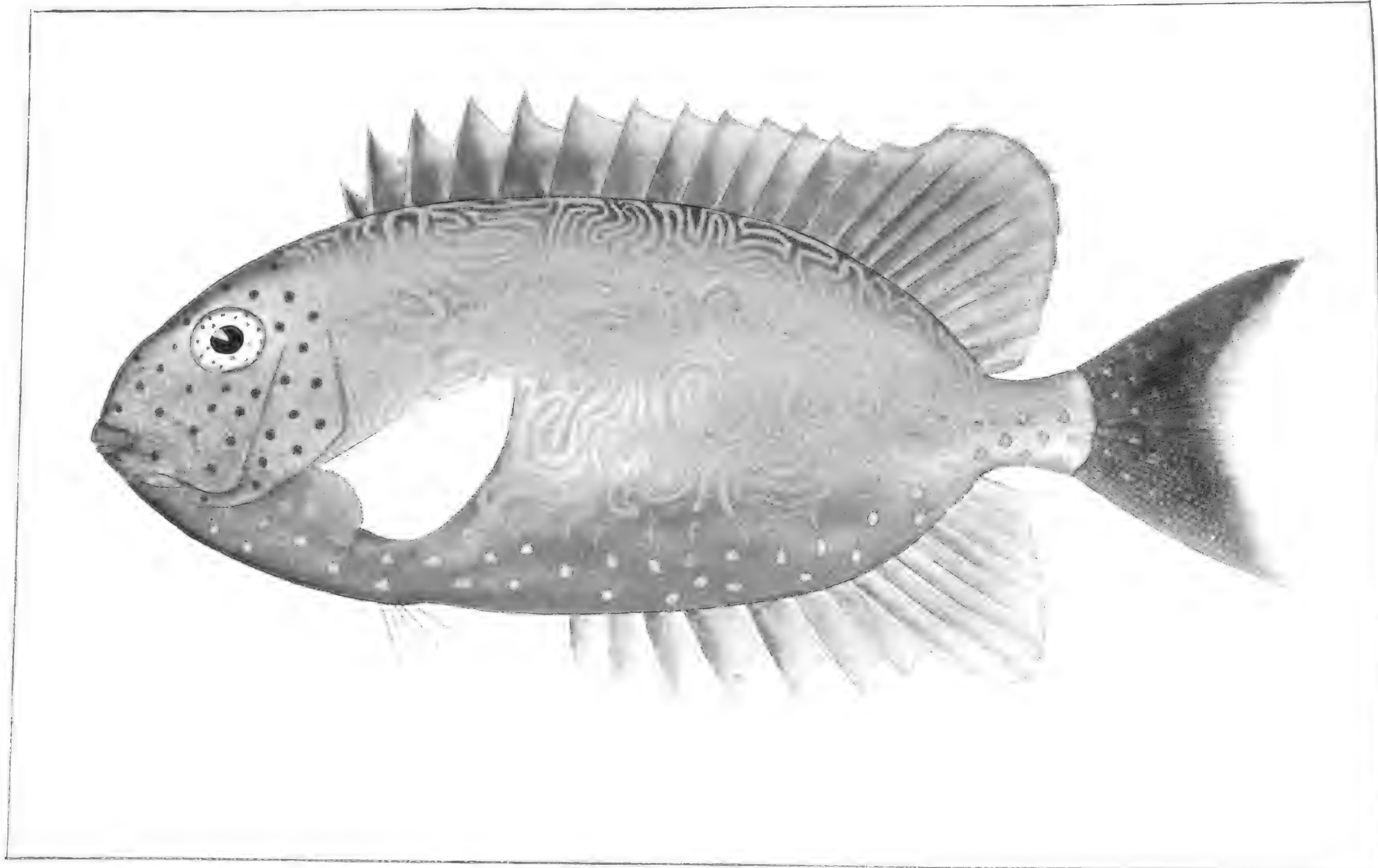
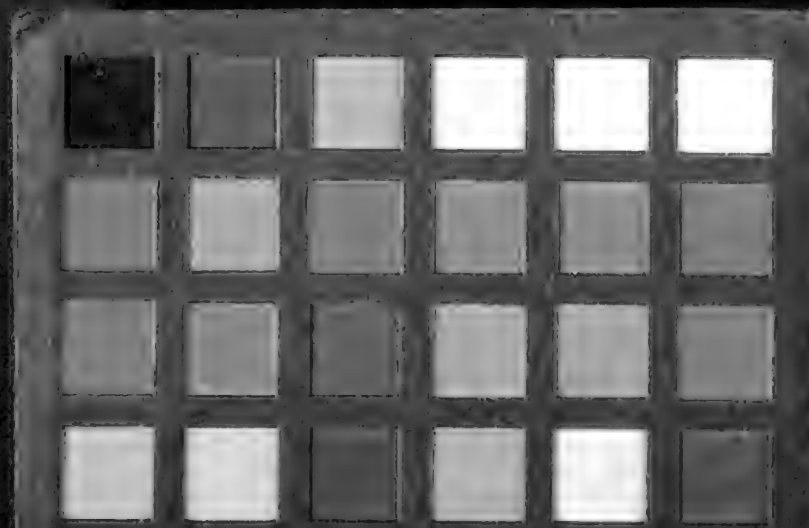
is in a point opposite to the vent  
 ... a base  
 ... length of the  
 ... like  
 ... it terminates  
 ... as the  
 ... one third  
 ... the caudal  
 ... more than  
 ... that it exhibits

... of the dorsal fin  
 ... which branches  
 ... beneath, and  
 ... the most  
 ... two-thirds of  
 ... with closely  
 ... lines, which  
 ... purple  
 ... basal half  
 ... four blue  
 ... the dorsal  
 ... the caudal  
 ... dorsal  
 ... dorsal  
 ... dorsal

Length 11 1/2 inches.  
Habitat ...  
Notes ...





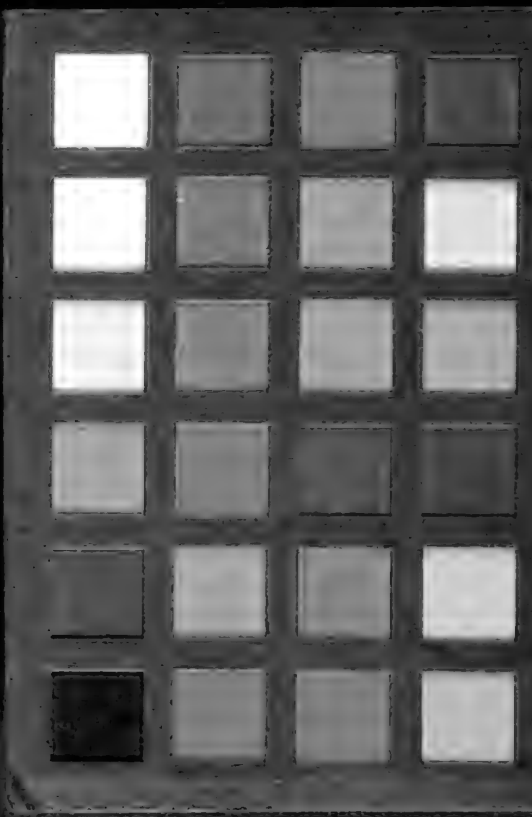
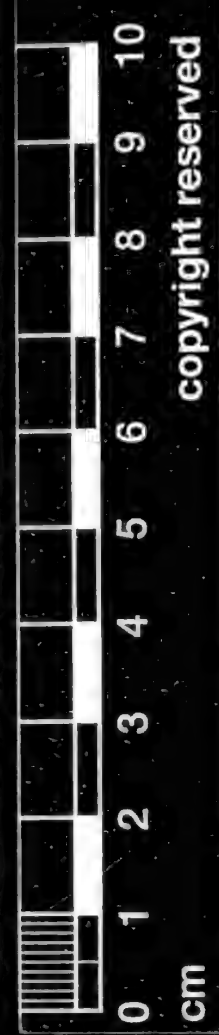
*Thalassoma kupa*

*Siganus*

*anthus*

5. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

From a small, very young specimen, the upper and lower jaws are small, curved from the front to the back. The head is greatly depressed, as compared to the entire length of the body. The head is oblongately conical, obtuse in front and compressed about one-sixth of the length of the body. The head is as broad as the head. The dorsal fin is small, situated above the base of the pectoral fin. The pectoral fin extends over a base equal to one-half the length of the body. The sixth or seventh spine is the tallest. The base of the soft dorsal is compressed to the spine, as far as possible, but not for the body. The anal fin is small, its altitude half the length of the body. The anal fin is small, its base equal to one-third the length of the body. The fish is much smaller than the body, but does not reach the anal fin. The anal fin is small, its height is less than the pectoral fin. The base of the soft dorsal is small. The caudal is large, deep, pointed. The lobes elongate, rounded. Color of the living fish: dorsal violet, pale beneath, with small, irregular brown spots which are more numerous shaped on the head, oblong on the front of the body, and on the head and throat. The sides are brown. The pectoral fin is





the large and small fins are not peltated  
with the body, but are in their soft portions  
more than rays. In the olive. (Pectorals)  
the upper and lower fingers with amber yellow  
but not the olive, sometimes with the  
olive. Dorsal of olive brown. The caudal  
is the same color as the body.

Length 10 inches

Hubert, Islet, Is. Kingmill Is.

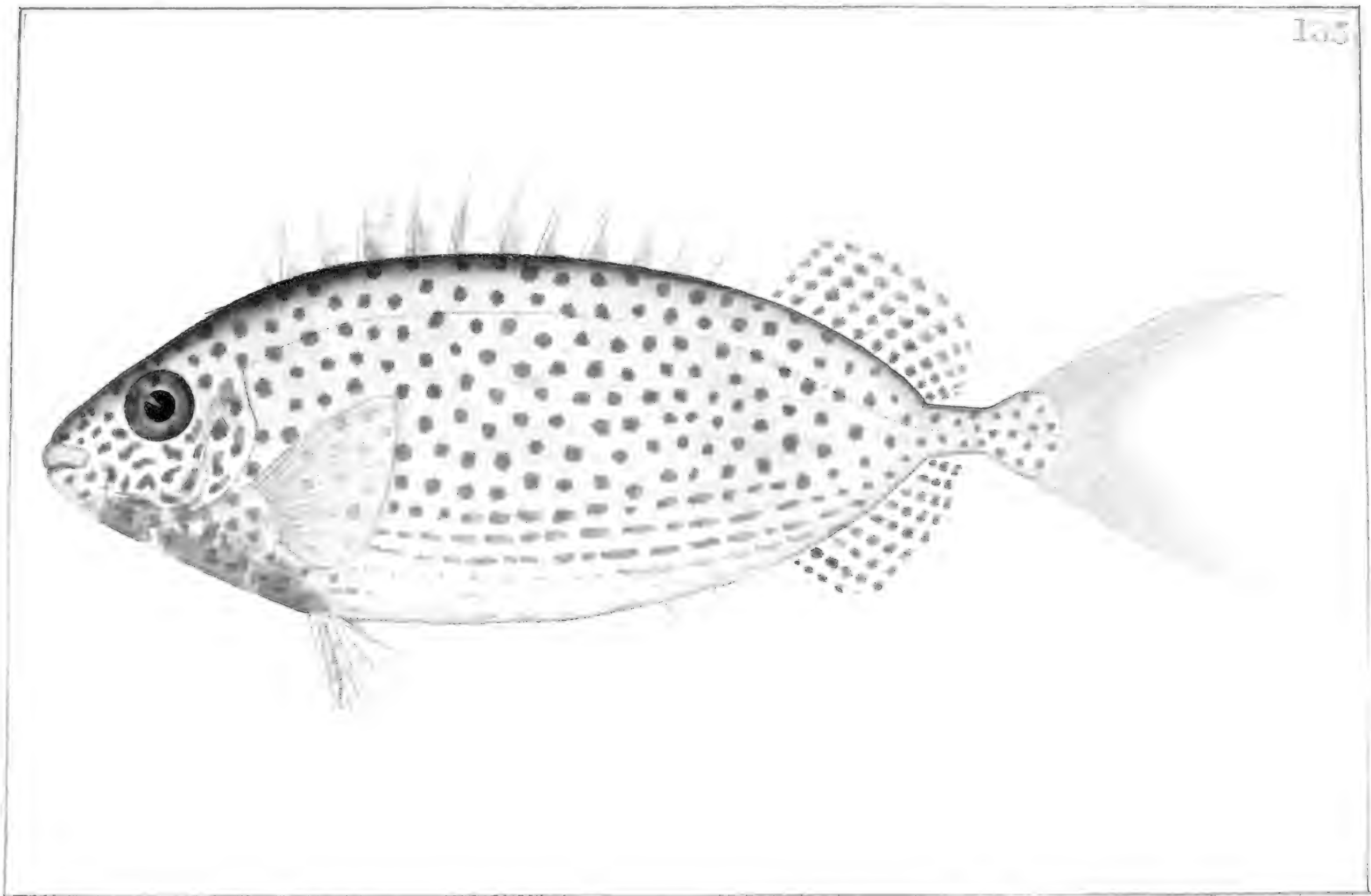
Hubert, Islet, Is. Kingmill Is.  
Hubert, Islet, Is. Kingmill Is.



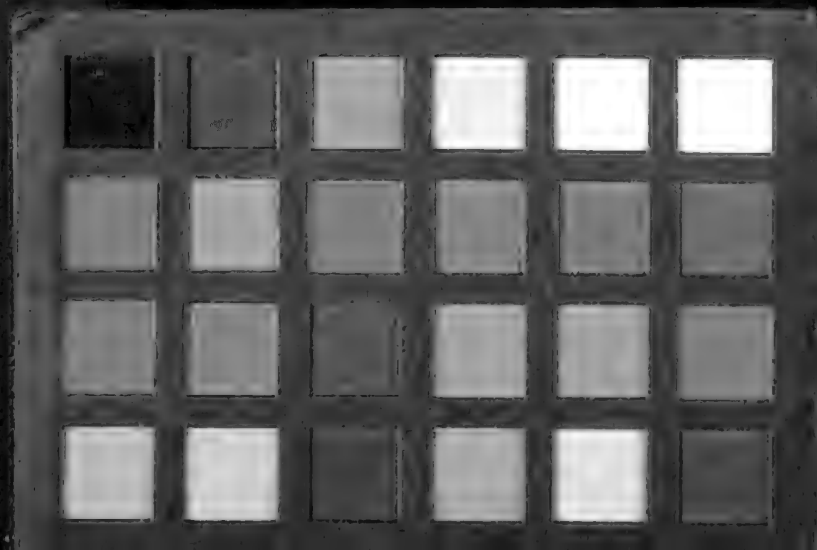
NATURAL  
HISTORY  
MUSEUM

97

135



*Thalassoma sp.*



**N** NATURAL  
HISTORY  
MUSEUM



*Myiophobus niger*

*Myricaristis*

of the second dorsal, anal, and pelvic fins,  
the upper and lower ones of the caudal,  
white.

*Scorpaenopsis diabolus*

Shattuck, 1880, p. 10, fig. 10,  
11, Hervey, 1881, p. 10, fig. 10, 11, 12,  
13.

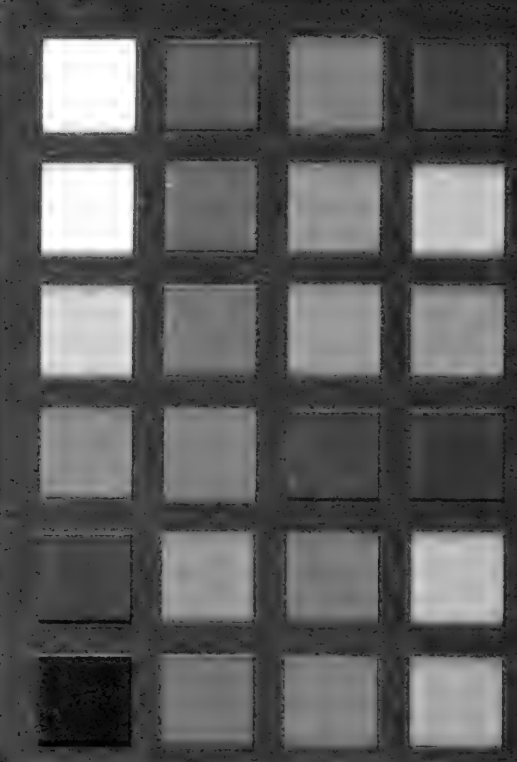
Remarks. . . . .  
species, characterised by the white  
marginal fin.

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0 1 2 3 4 5 6 7 8 9 10  
cm

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*Handwritten:* Godeffroy

*Journal des Muséum Godeffroy. Heft*

*Fische der Laidson. Heft 12. Taf. 61.*

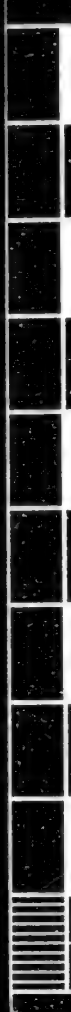
*Unverändert zu copieren*

*Handwritten:* Godeffroy

*Myripristis murdjan.*

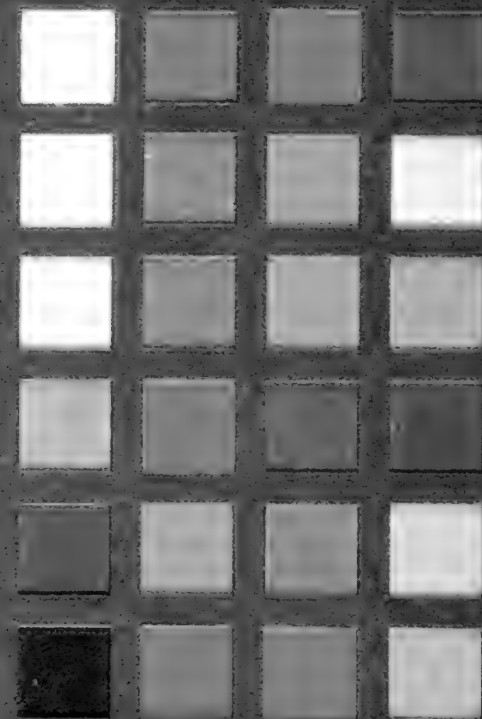


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HISTORY  
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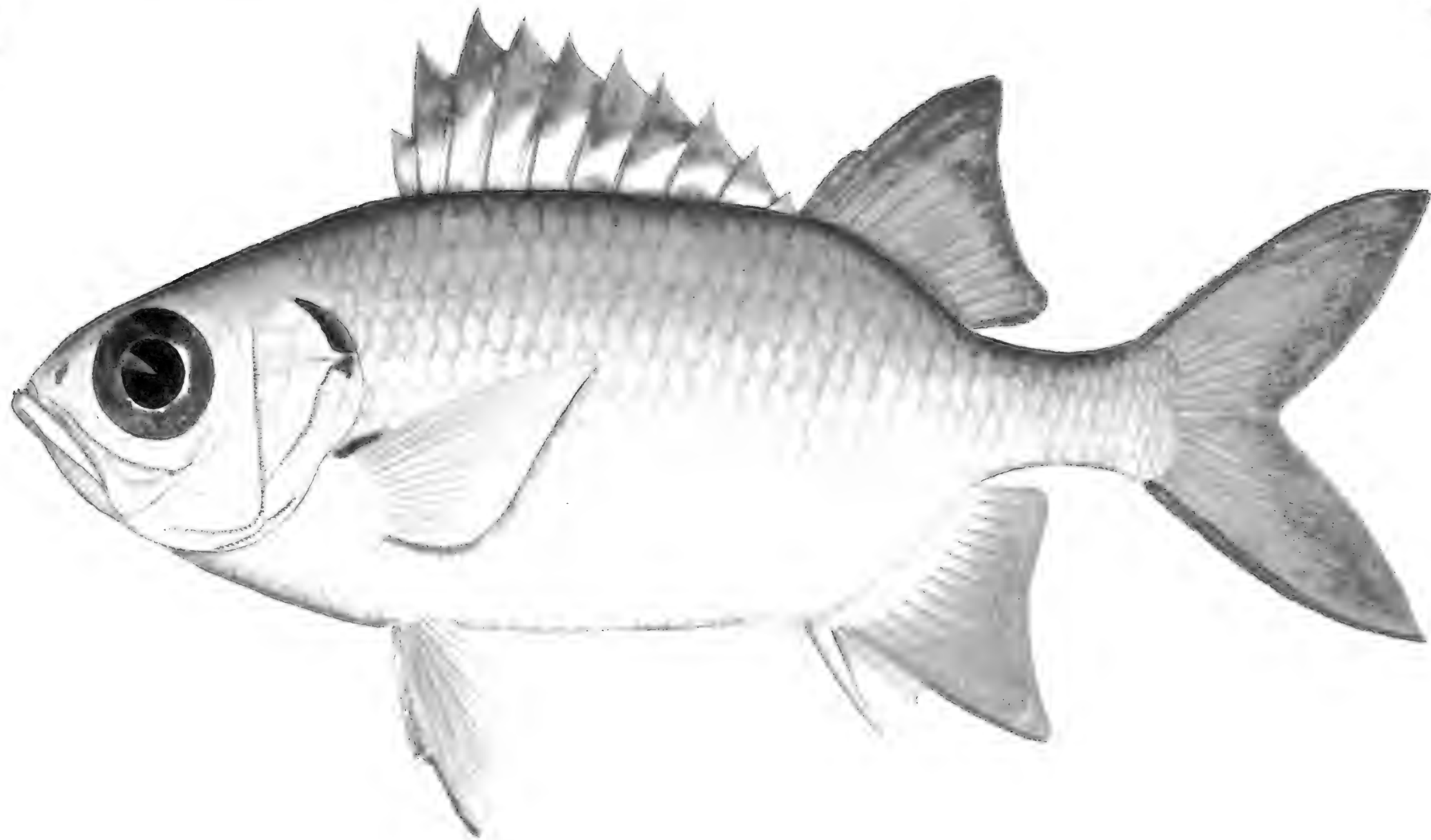
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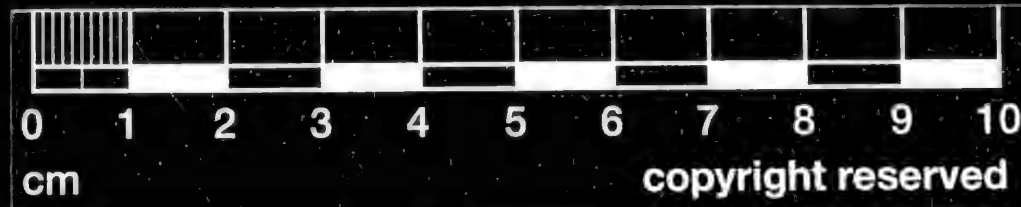
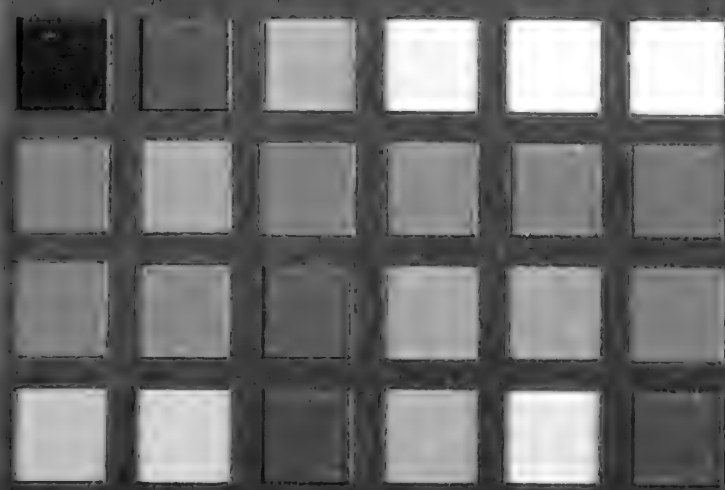


40

185



*Myripristis murdjan*



**N** NATURAL  
HISTORY  
MUSEUM



*Myripristis murdjan*  
*var. acaules*

## *Myripristis*

39

107

107

2.7; 2.10-14; 1.5-2.0; 1.5-2.0; 1.5-2.0.

The head comprises one third of the total length, caudal excluded. Superoculocaudal, their diameter to length of head, as two to five. The head is up of the maxillary, does not extend much so far back as the posterior limit of the orbit. The soft dorsal and anal are concave along their extreme margins, and rounded off on their deepest portions.

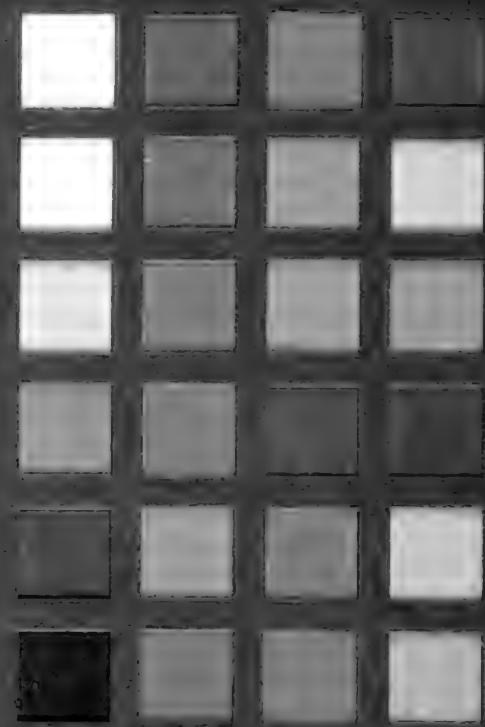
Color: above the lateral line the scales are light greenish, becoming bluish and bluish along the body with copper-red in the upper half of the body. The lower margins with black line, and in the marginal space of the lateral line a deep blackish brown spot. The posterior axilla and opercle are white. The top of the head is bluish black, and the snout sculpture is black. The tongue with copper-red. The scales are slender, with the dorsal spine dorsal is reddish brown, and its median portion is white. The other vertical fins have most of their membranes colorless, rays tinged with pink.

NATURAL  
HISTORY  
MUSEUM



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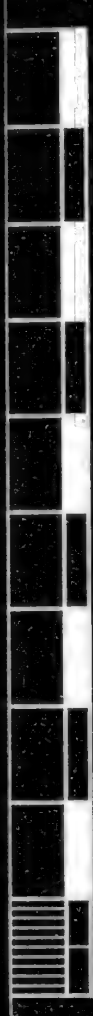
and the extreme outer portion of each is deep black shade off into the white with red. The pectoral fins ventrals have colorless membranes and pink tips.

Length, 10 inches

Habitat: Society, Isl. Kingman  
Is.

Remarks: This seems to be a very rare species at either of the two above mentioned locations. At the former group of islands it is called "U-na-to". The black margined fins are its most prominent characters.

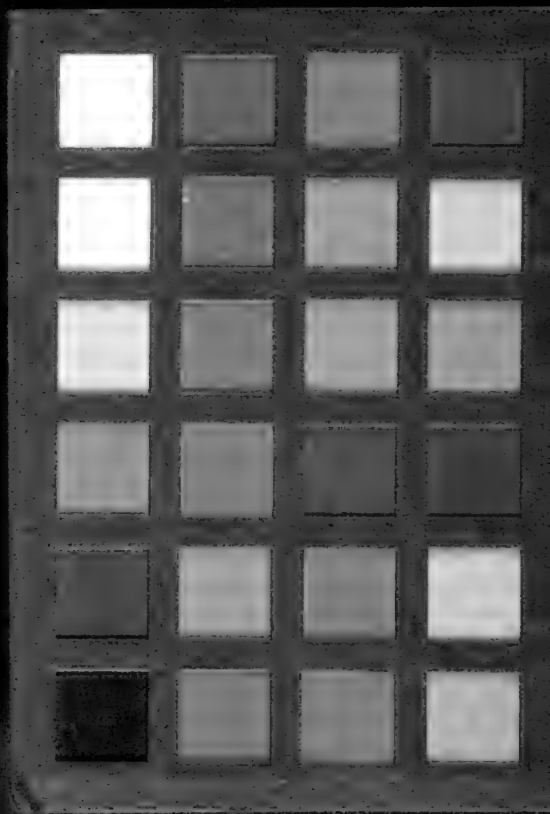
NATURAL  
HISTORY  
MUSEUM



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brilliant violet. Young breast violet  
with iridescent blue spots. The  
coloration more like a ... ..

Length, 6 inches.

Habitat. ... ..  
Hingham ... ..

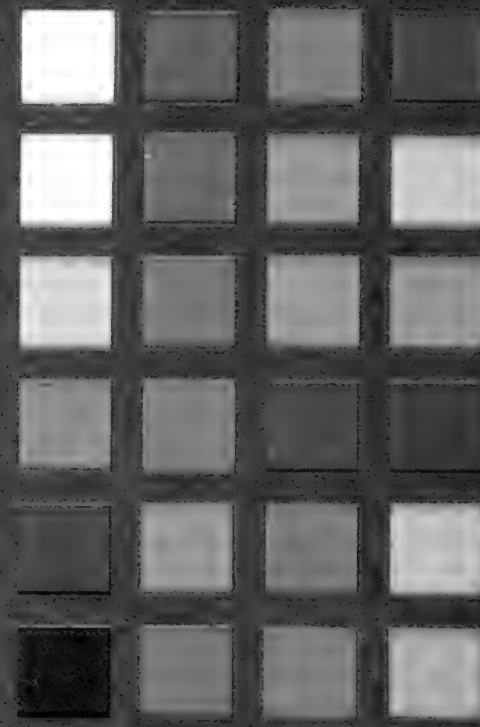
Remarks. ... ..  
... ..  
... ..  
... ..

NATURAL  
HISTORY  
MUSEUM

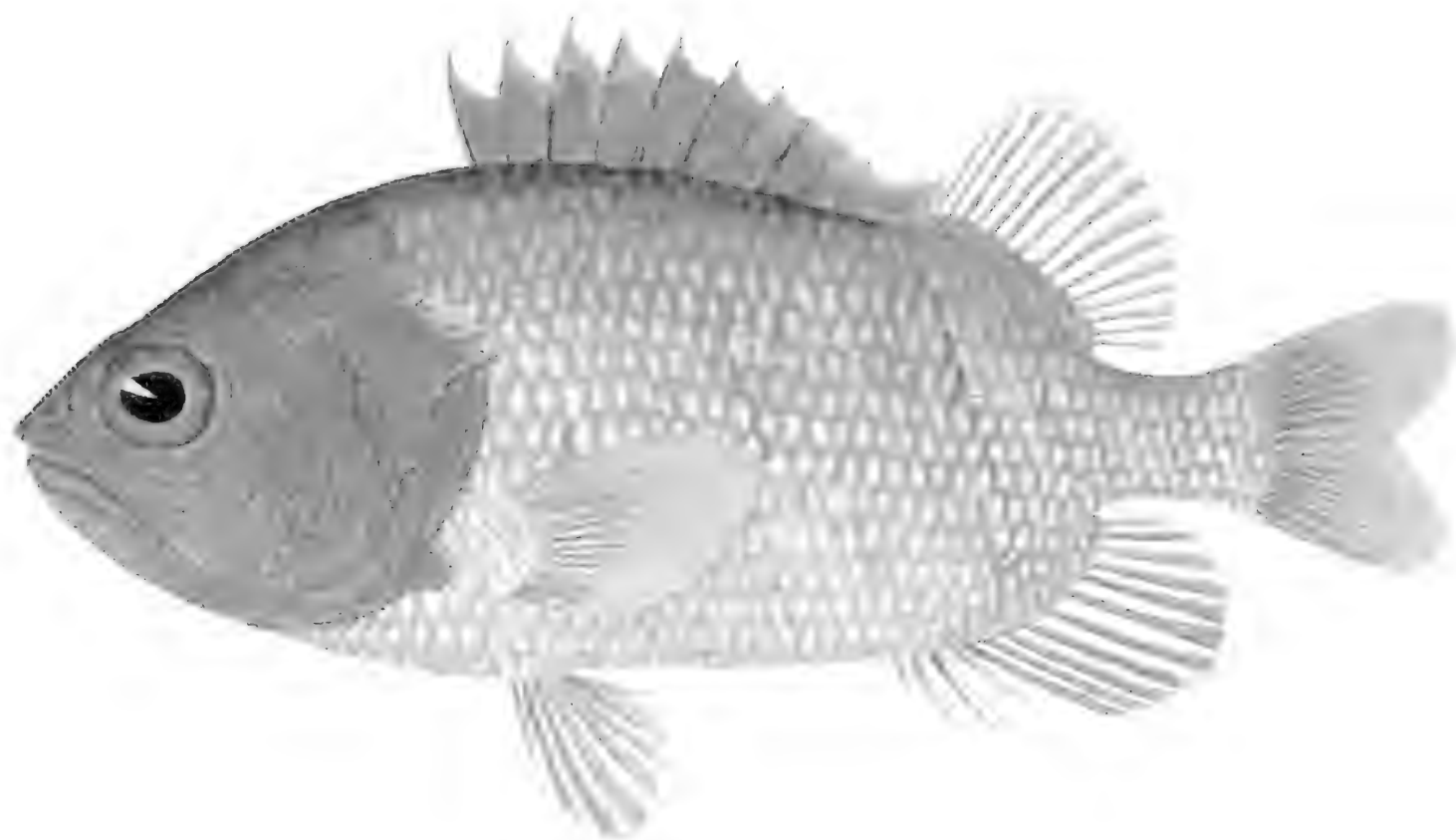


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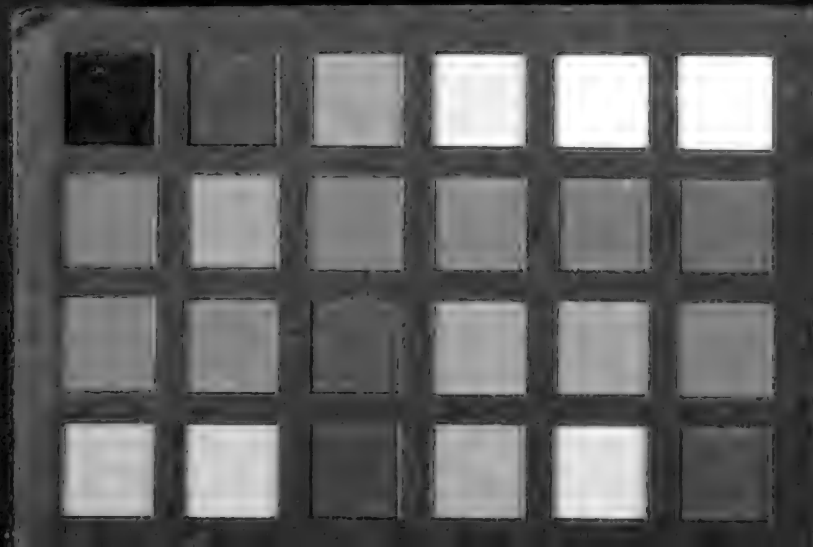
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*Myripristis lima*



Holcenchthon 1077

Quincy, Mass. July 27 - 1877. (Rev. Mr. D.D.)

I used fine wire in little increments of the base of the pectoral, the fourth spine the tallest. In structure of the other fins see the drawings.

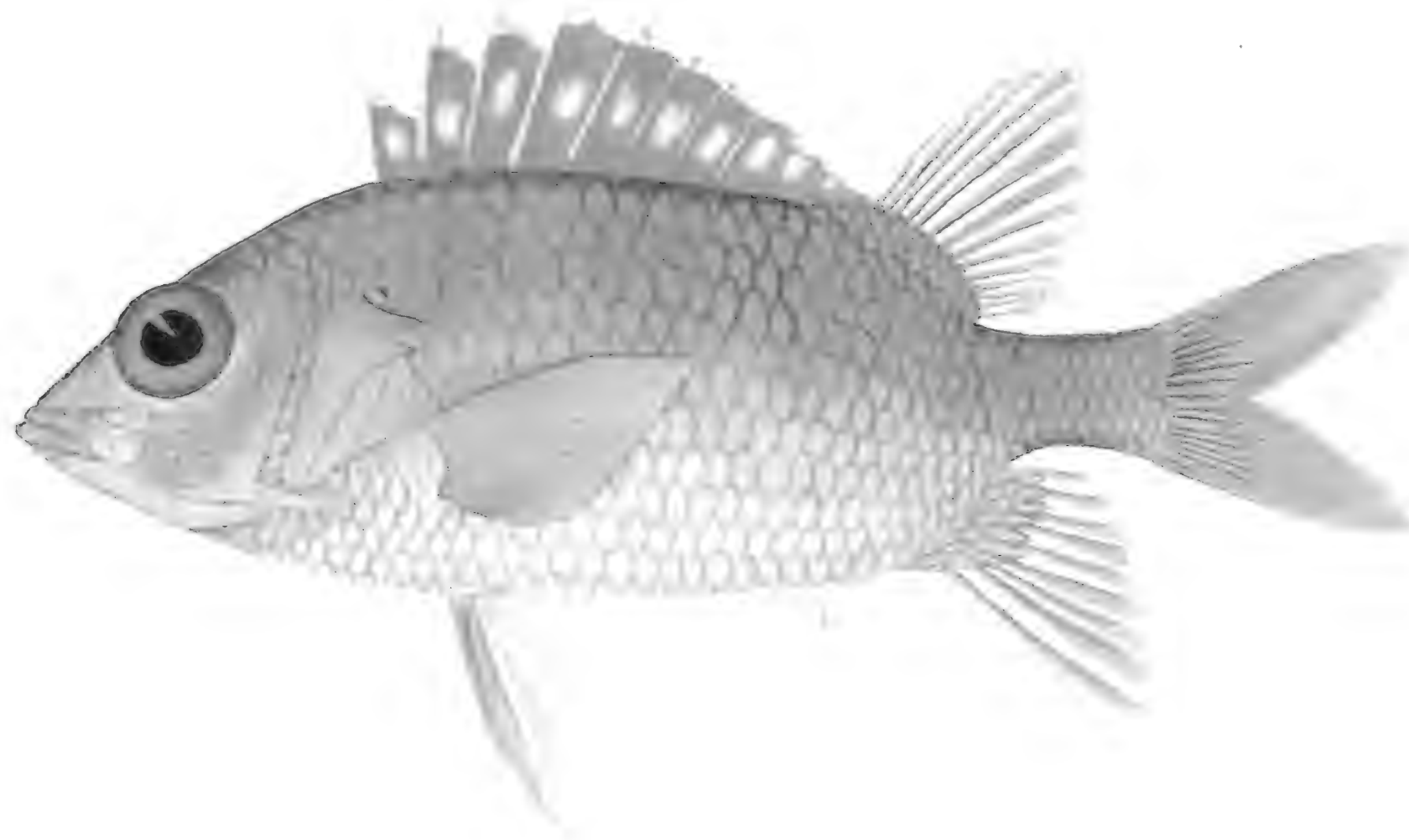
Color from indigo red pale to  
white, each scale reflecting a  
blue in certain lightness. The lower  
part reflects a golden red. The  
same hue as the body, with deep  
shades. Spines dorsal black with  
a series of diffuse white spots along  
the middle and tipped with white  
above and the other fins more or less  
indigo red.

length 1.5 inches.

Feb. - Feb. 1, 1900.

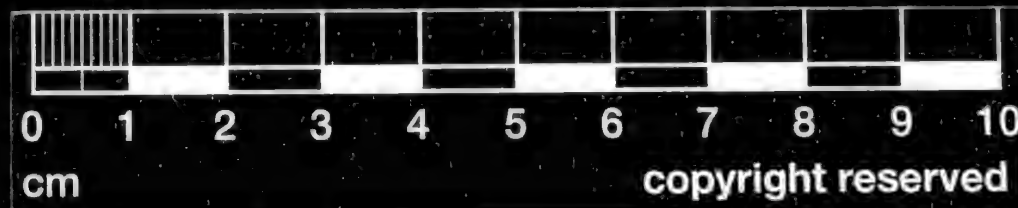
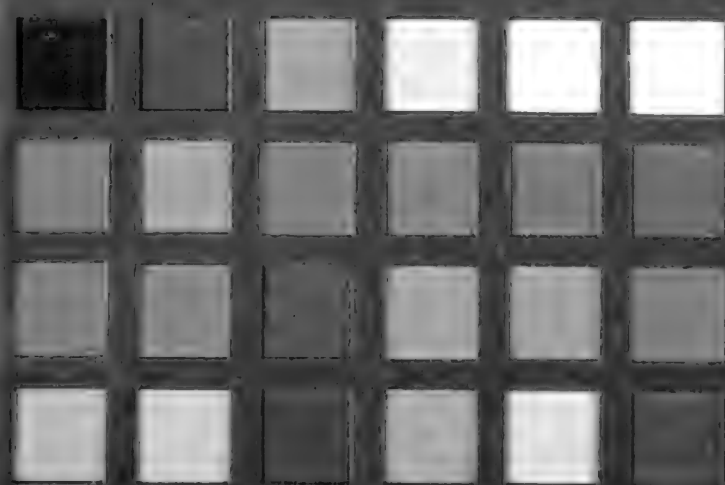
Intip, ...





*Holocentrum* sp.

1881



**N** NATURAL  
HISTORY  
MUSEUM

*Helicentron diadema*, Leach.

*Helicentron diadema*, Leach, *Proc. Zool. Acclimat. Soc. London*, vol. 1, p. 10, 1849.

... ..  
... ..  
... ..

*Arca pulchella*, Smith, *Trans. Phil. Soc. London*, vol. 1, p. 10, 1849.

*Helicentron diadema*, Leach, *Proc. Zool. Acclimat. Soc. London*, vol. 1, p. 10, 1849.

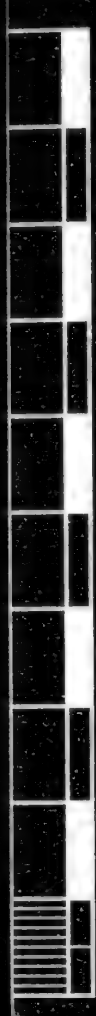
... ..

The splendid species is rather slender, the greatest depth being a little less than a fourth of the total length, and the thick part half the depth. The head comprises one third of the fish, and is rounded. The eyes are striking and in shape, their greatest diameter is compared to the length of the head as two to five. The slender tip of the maxilla, with a vertical dentition, the inferior edge of the operculum.

The spring dorsal is more regular, arched than a sail. The pectorals being the tallest in the series.

Color more white. The side of the body a longitudinal line of pale

NATURAL  
HISTORY  
MUSEUM



0 1 2 3 4 5 6 7 8 9 10  
cm

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with carmine red. The upper finches  
are wider than their inter-finger ones,  
equal to the number of line of scales.  
Checkers and upper part of head carmine  
red. Slightly dusky front, red below,  
dark red above and beneath, and the  
anterior upper finches are most prominent,  
deep black. Ventral surfaces, except on  
slight faintly red line on the under  
edge. All the other fins small, except the  
except those ones which are faintly red.

Length, 5 to 6 inches.

Habitat.—Ambergris Is., South Is.,  
Kingman Is., Lower Is., Panama Is.

Remarks.—The splendid little  
species is quite abundant at the above  
location. Bennett's figure in the Zoological  
Journal is incorrect in outline, and con-  
veys no idea of the color of the fish.

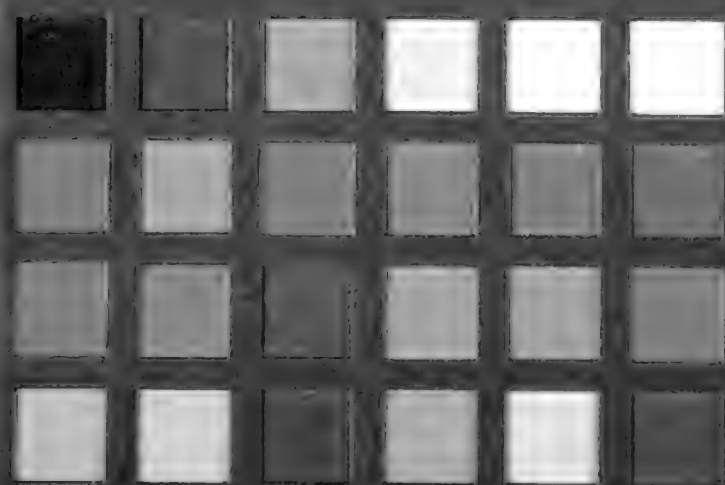
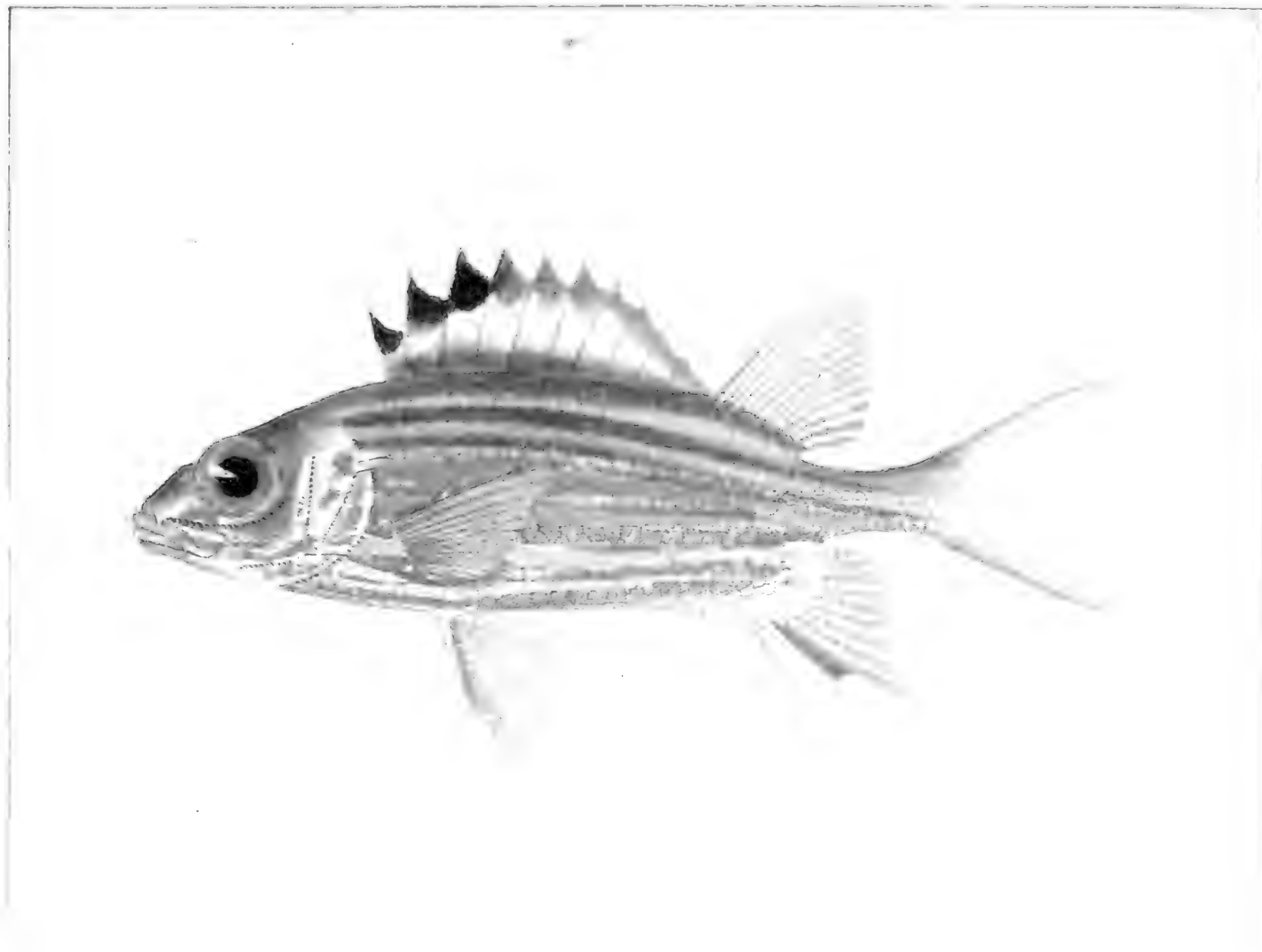
NATURAL  
HISTORY  
MUSEUM



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*Holocentrum microstoma*

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**N** NATURAL  
HISTORY  
MUSEUM



*Holcetrum erythraeum*

*Holcogramma litorale*, Linn.

*Holocentrum line, var. at lat. 11° 15' N. 10° 15' E.*

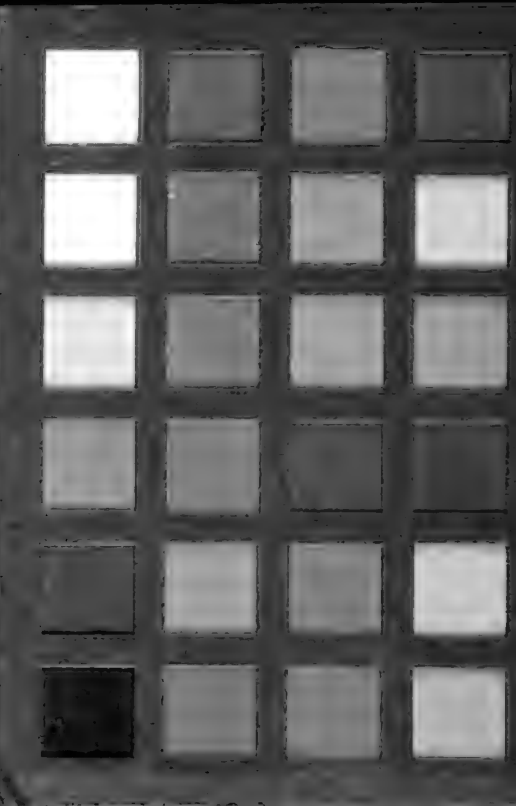
*Callitriche*, p. 82.

Si non, singola famiglia,

1921, 1922, 1923

3.8) Let  $f: \mathbb{R}^n \rightarrow \mathbb{R}$  and  $g: \mathbb{R}^n \rightarrow \mathbb{R}$ . Let  $(x_0, y_0, z_0)$  be a point in  $\mathbb{R}^n$ .

const. but not least two—



The dorsal fin is small, with  
in advance of the caudal fin, and  
the pectoral fin is the largest in the same  
portion of the side.

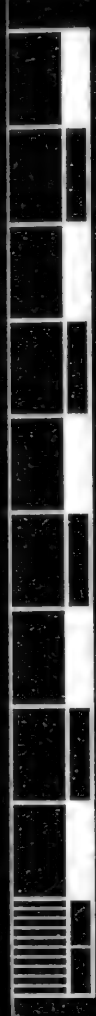
When the animal is young, it is  
becoming more brownish, and almost  
only the belly. The same color each  
a central pale unmarked violaceous  
blue spot, which in addition to the spot  
on the shoulder, extends to the side with  
darker clouds. The dorsal fin is black red,  
paler towards the base, lighter above with  
whitish, and the median portion is  
marked with a series of large diffuse  
colorless spots. Left dorsal, anal, and  
pectoral fins pinky red and almost red  
above, basal deep scarlet red becoming  
much paler posteriorly, anal fins pale  
pinkish red and anteriorly suffused with  
black-red.

Length, to 10 inches.

Habitat—low rich hills, scrub, trees,  
Kingmill Is., Hervey Is., Macmillan Is.

Remarks—A common species at  
all of the above mentioned localities. Its  
vernacular name among the natives  
Solomonian islands is "I-hi-hi".

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HISTORY  
MUSEUM



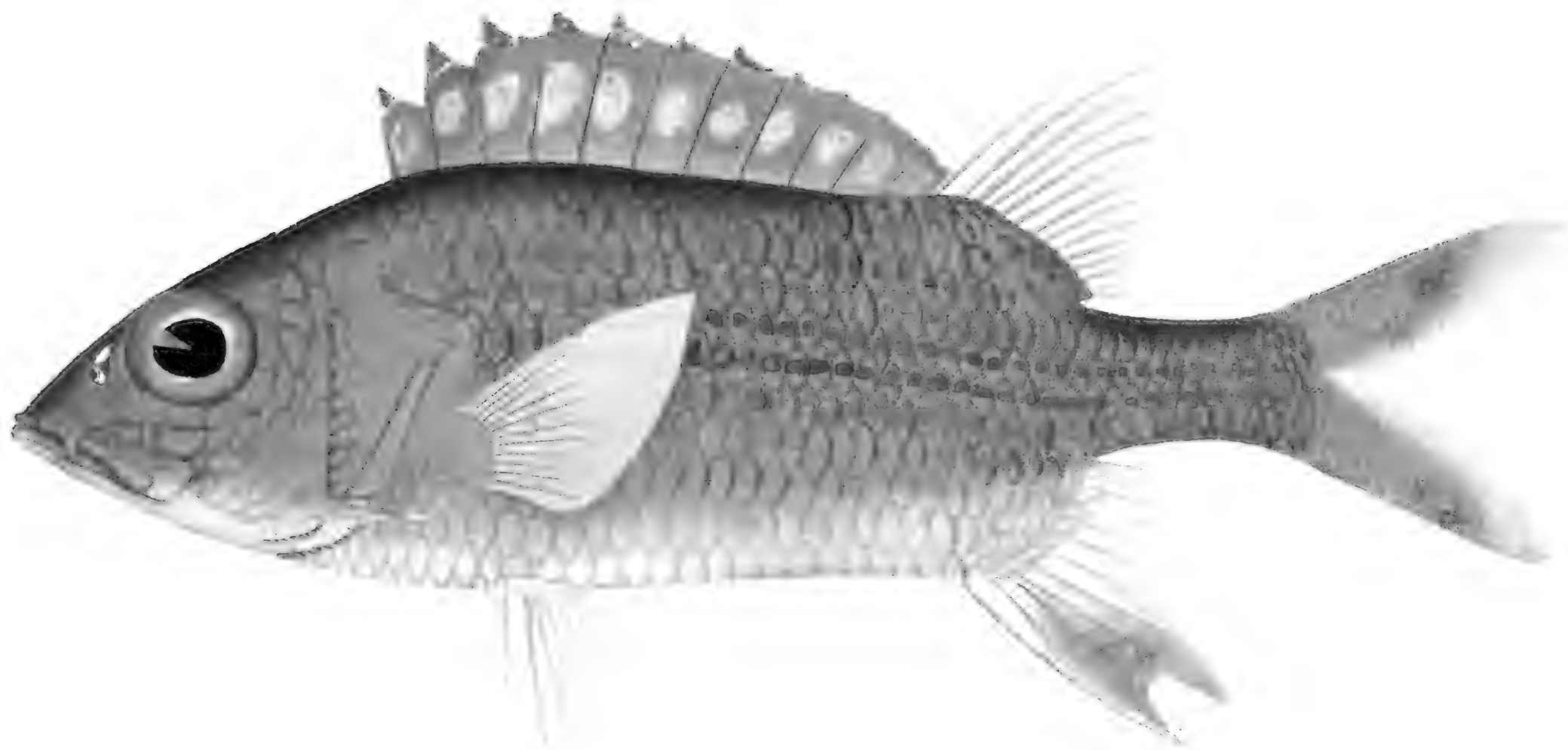
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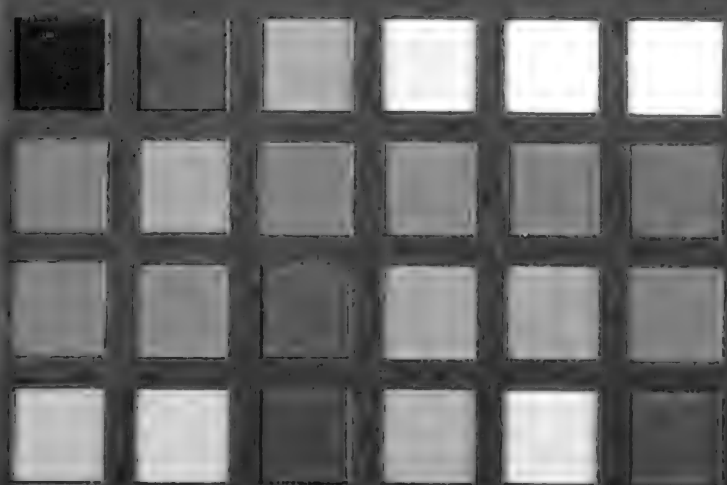


34

141



*Holocentrum erythraeum*



*hol. sammara*

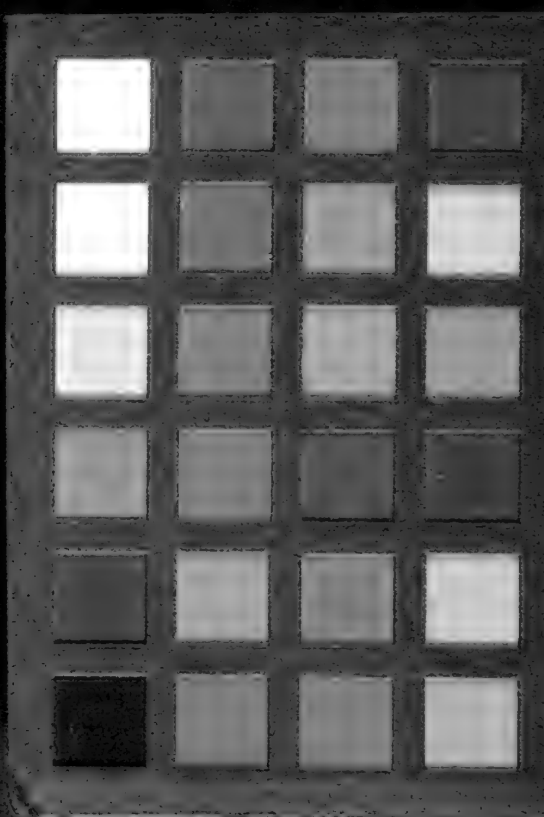
*Colocentron*

1. 11-12; 2. 4-5; 3. 7; 4. 1/2 to 3/4; 5. 1/4

The general form of *Colocentron* is rather slender, more so than is met in the whole species. The greatest depth of the body is less than a fourth of the total length. The head comprises one-third of the whole, rounded behind. The eyes are small, but are set far apart as compared with the length of the head. There are three or four such cheek marks, represented by a series of small, round, white spots, arranged in a row along the greatest depth of the body. The posterior tip of the maxillary extends a little beyond the anterior border of the mouth.

The dorsal fin is small, above the base of the pectoral fin, arising from a small, dark spot, and is about half the length of the anterior fin.

*Colocentron* is a certain light, iridescent blue and white. Belly white. Sides with numerous thin, vertical blackish lines, more numerous





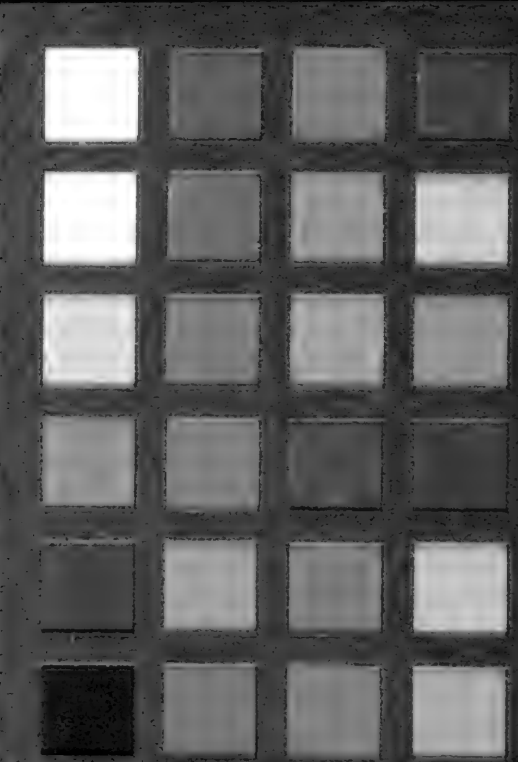
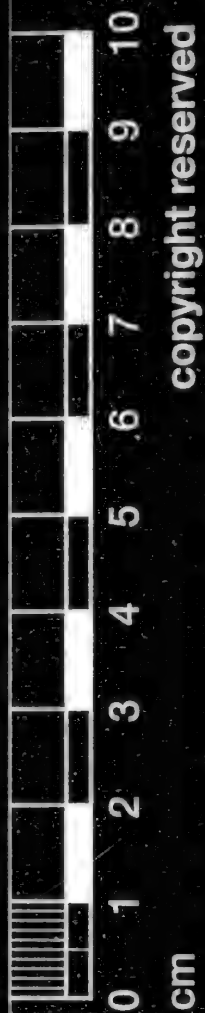
cheeks spotted with blackish to iron white  
silvery, shaded with brownish. The  
posterior part of the head is brown with  
the white center, and the top, to the back  
the dorsal region of the body, is brownish.  
Spiny dorsal fin brownish, and rounded  
along its middle third with white to  
black. The soft dorsal and anal are  
pale yellowish, more intensely so in  
the rays, both anteriorly, suffused  
with brownish etc. Ventrals pale pinkish,  
the upper ones lower bottom white to  
black. Pectorals light pink. Ventral color  
less.

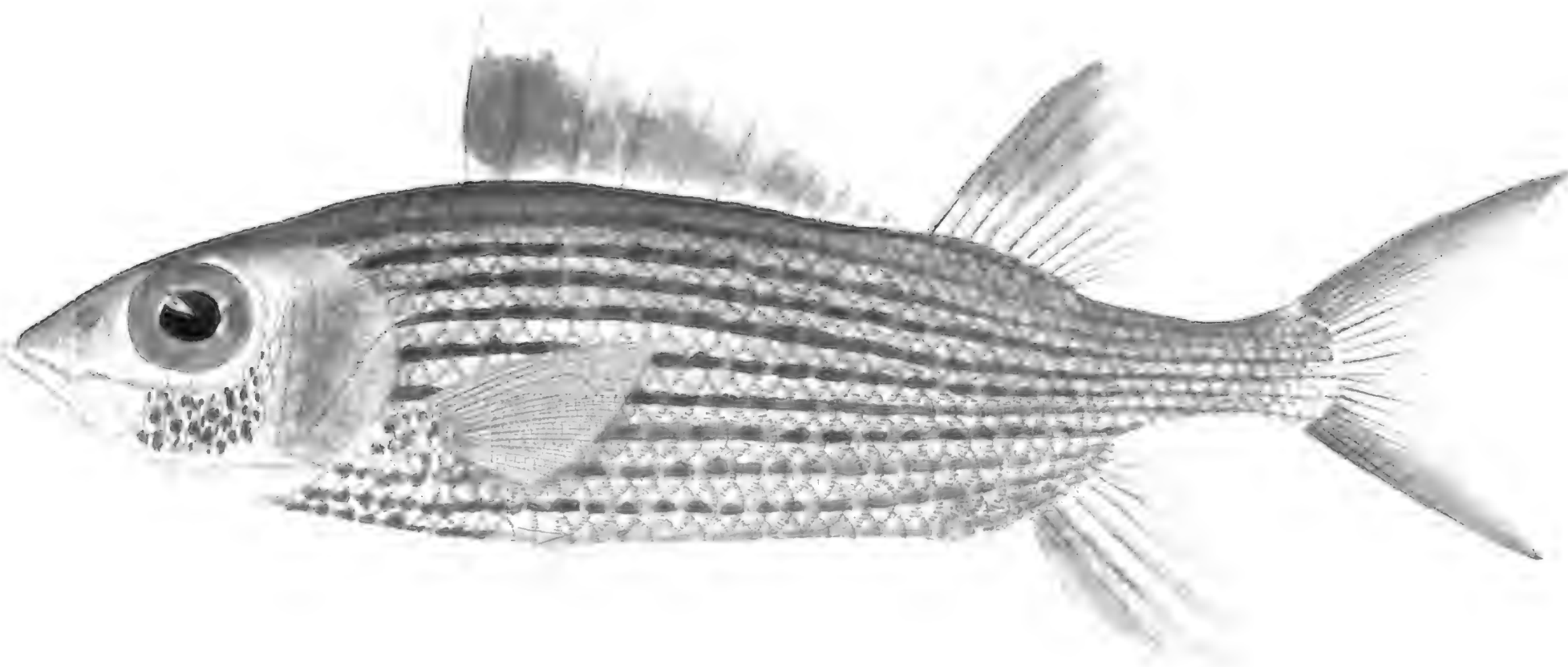
Length 4 to 10 inches.

Habitat: Forests by streams  
etc.

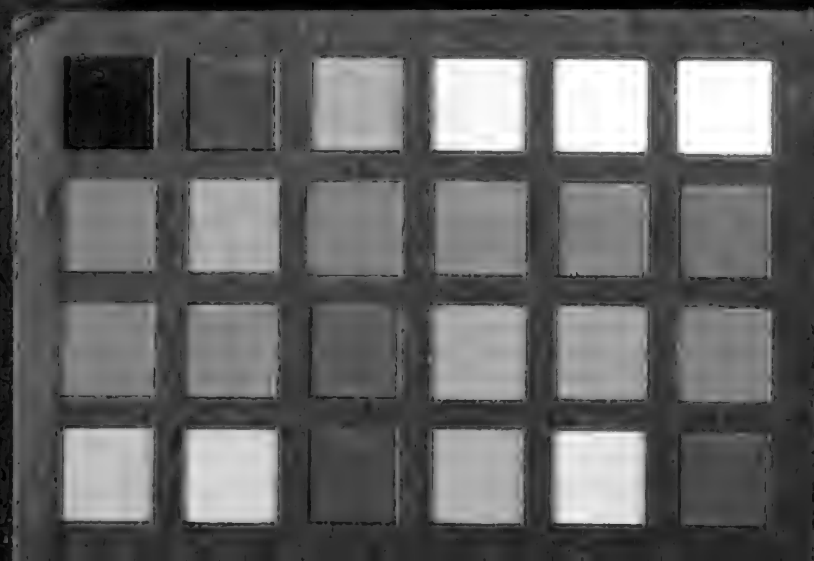
Remarks: Not abundant at either  
of the above locations.

NATURAL  
HISTORY  
MUSEUM





*Holocentrum sammara*

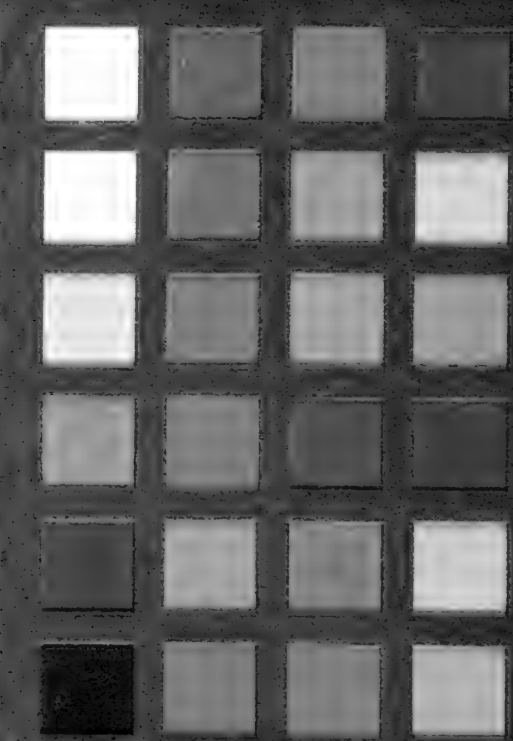
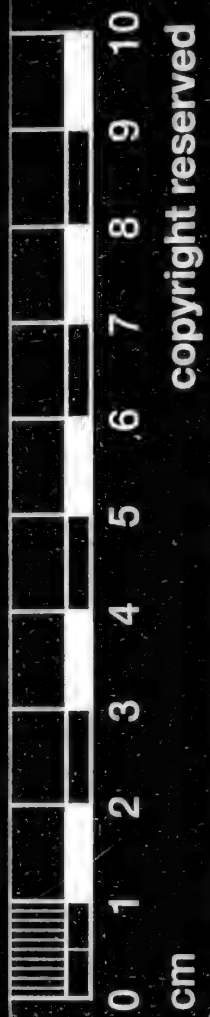




*Hol. operculare**Hol. trum*

Length 12 mm. Body of a slender, tapering form. The depth of the body is nearly equal to width of the head. The head is slightly broader than the body. The head is covered with small, dark, granular scales. The body is covered with small, dark, granular scales. The dorsal fin is small, with a single ray. The pectoral fin is small, with a single ray. The pelvic fin is small, with a single ray. The anal fin is small, with a single ray. The caudal fin is small, with a single ray. The head is covered with small, dark, granular scales. The body is covered with small, dark, granular scales. The dorsal fin is small, with a single ray. The pectoral fin is small, with a single ray. The pelvic fin is small, with a single ray. The anal fin is small, with a single ray. The caudal fin is small, with a single ray.

Color above, dark brown; beneath, silvery. The dorsal fin is small, with a single ray. The pectoral fin is small, with a single ray. The pelvic fin is small, with a single ray. The anal fin is small, with a single ray. The caudal fin is small, with a single ray. The head is covered with small, dark, granular scales. The body is covered with small, dark, granular scales. The dorsal fin is small, with a single ray. The pectoral fin is small, with a single ray. The pelvic fin is small, with a single ray. The anal fin is small, with a single ray. The caudal fin is small, with a single ray.

NATURAL  
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MUSEUM

lateral fin, not becoming yellow  
posteriorly. Dactylopterygii with small scales  
with a slight point, like on their  
ray.

Length 5 to 10 inches

Habitat - brackish water, somewhat  
etc.

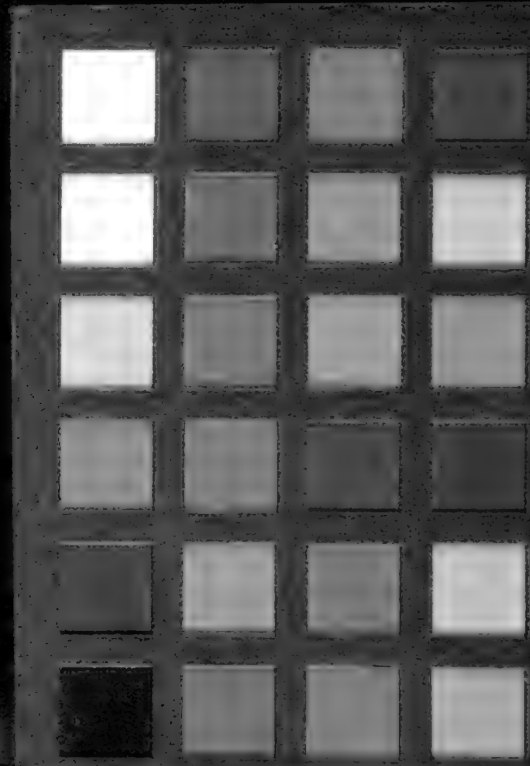
Remarks - The beautiful fish  
may be distinguished by its black  
spiny dorsal, and the absence of spots  
on the body.

NATURAL  
HISTORY  
MUSEUM



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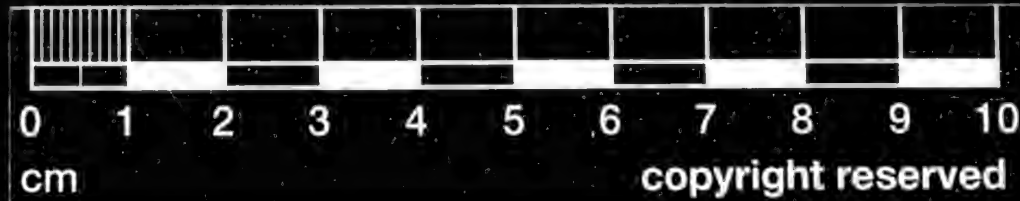
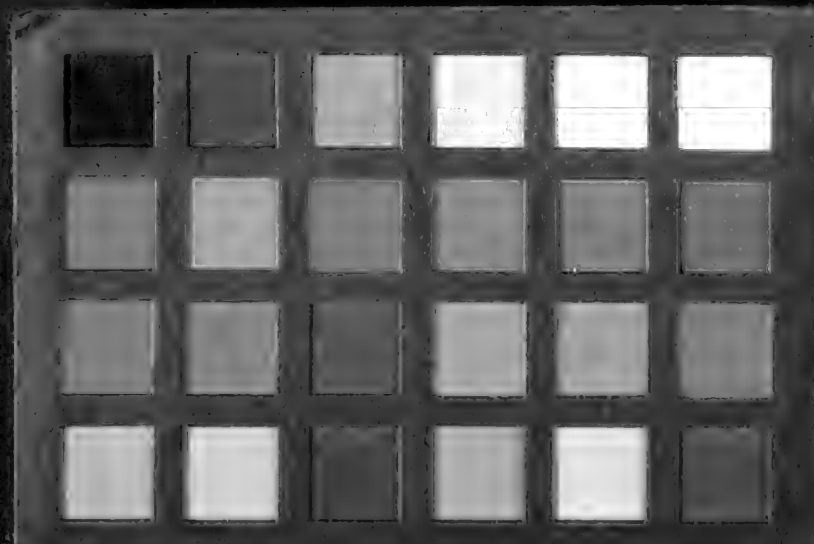
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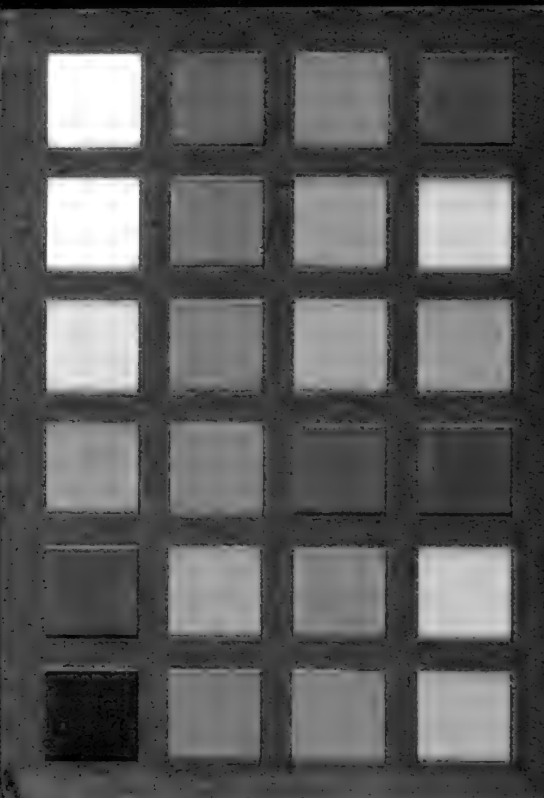


*Holocentrum operculare*



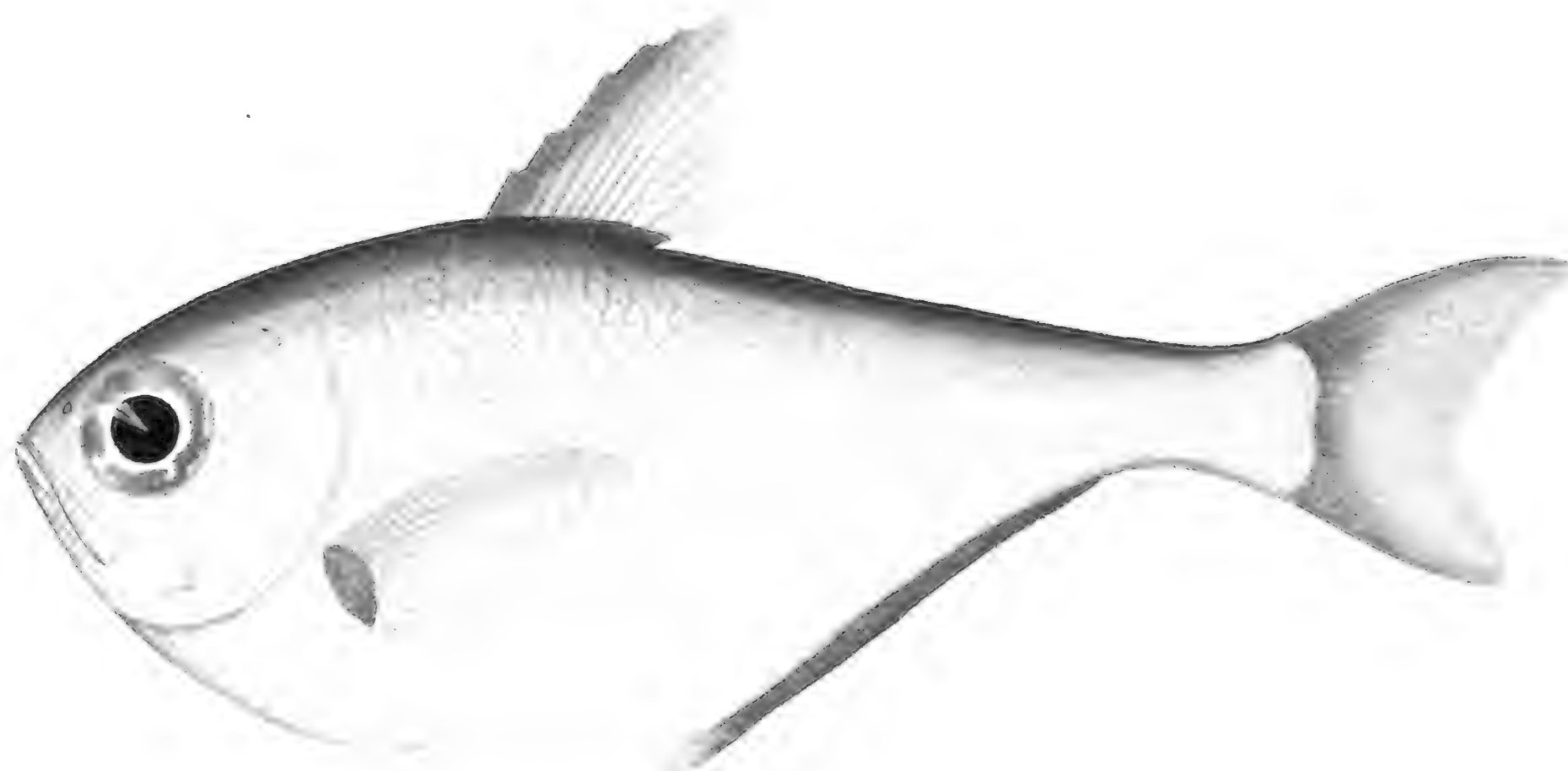




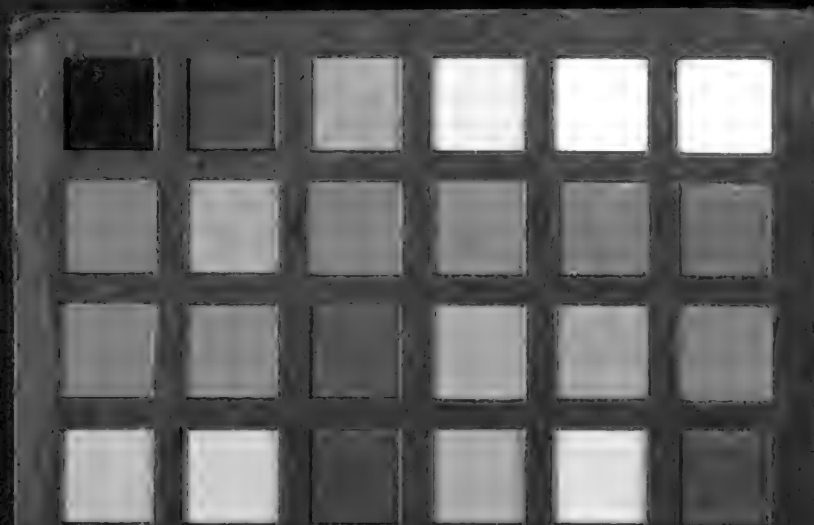


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1-11



*Pempheris mangula*



**N** NATURAL  
HISTORY  
MUSEUM



*Polynemus* sp. nov.

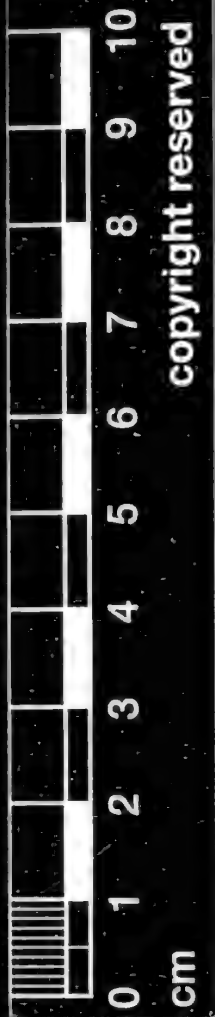
B. 6; D. 8/14; A. 12; P. 10; V. 17; L. 4, 2, 2, 2.

The head comprises about two-fifths of the body length, is a little more than the greatest depth of the body, which latter is at the origin of the dorsal fin. The snout is quite prominent and rounded, and the upper line of profile has a very gentle ascent to the dorsal fin. Eyes large, circular, their diameter entirely about four times in the length of the head. The hinder stop of the maxillary extends posterior to the eyes. The filaments are six in number on either side.

The first spine of the dorsal fin is very small, the second is nearly as tall as the third, which is the highest, and the following immediately decreasing in altitude, so that the fin is deeper than long. The second spine is more elevated than the first, and is longer than long, and its upper margin is strongly concave. The anal is more than the opposite fin. The ventrals when close to approach to the belly, and are the vent. The caudal is large, forked, the lobes pointed.

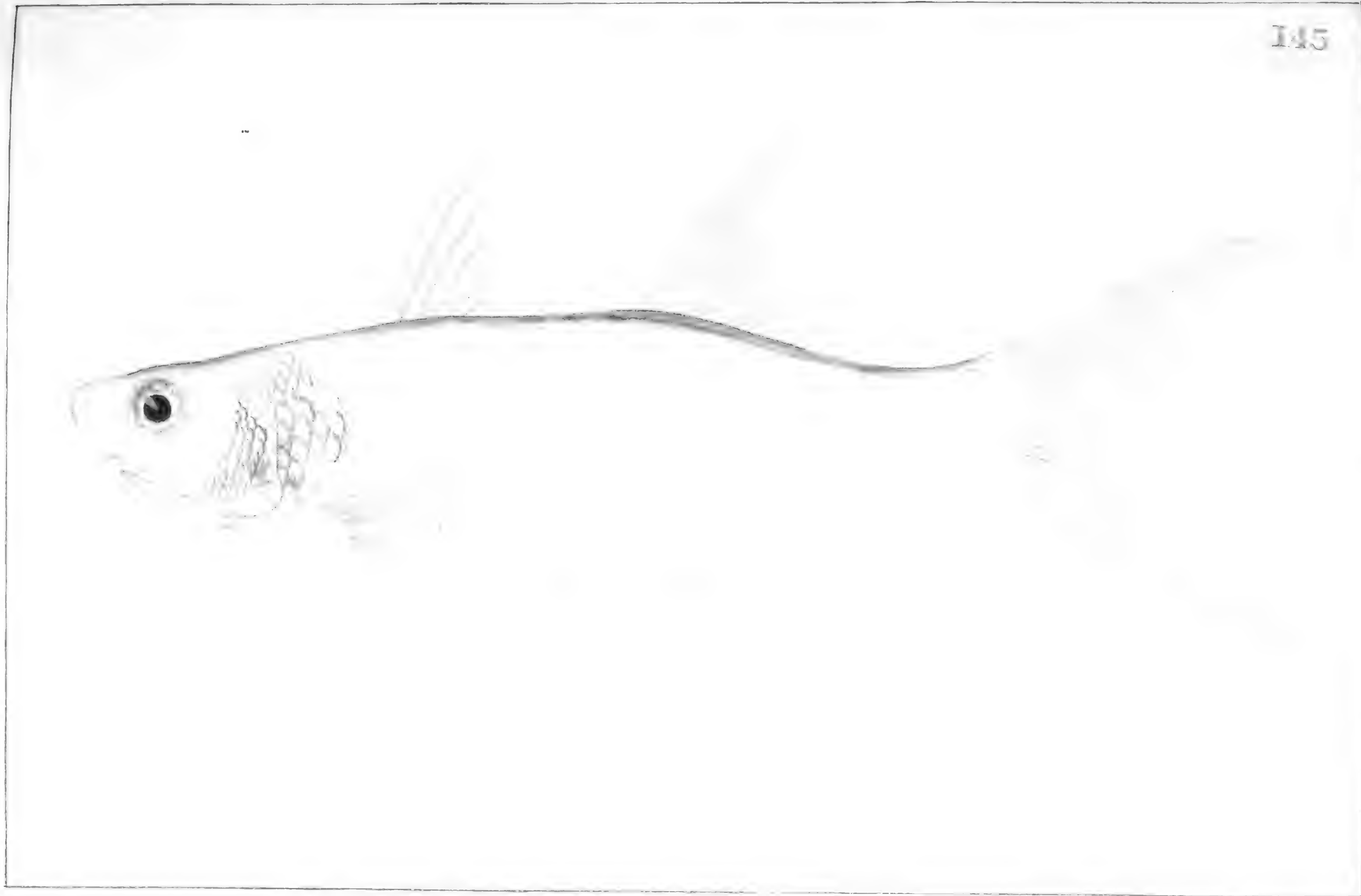
Color grayish silver. Body finely lineated lengthwise with brown. Ventrals more or less broken lines. Cheeks and gill covers silvery. Dorsal fin and snout light olivaceous. Sides silvery, mixed with brown. Fins more or less dusky. Length 12 to 16 inches. Hab. Society Is.

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HISTORY  
MUSEUM

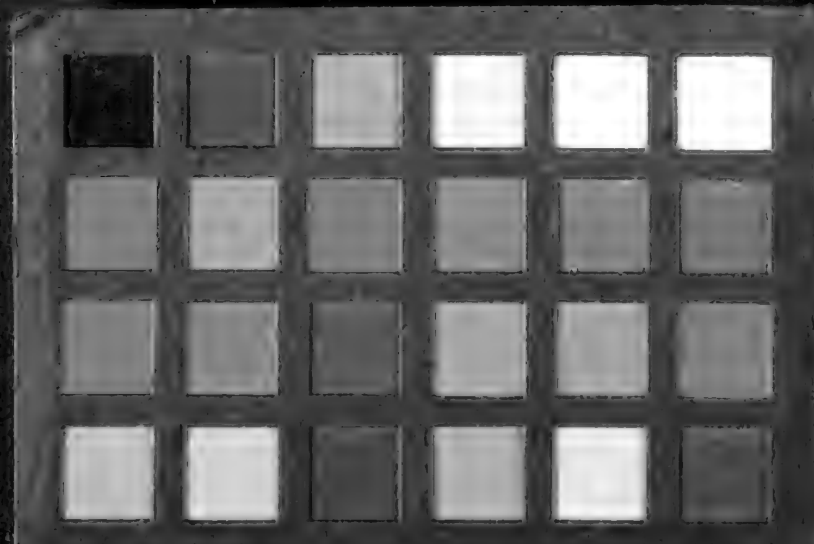


375

145



*Polynemus sexfiliis*



**N** NATURAL  
HISTORY  
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serpens

Gymnophthalmus retrofrons

B. 7; D. 29/12-7; L. 6.5; H. 1.4; T. 1.1; C. 1.1

Head very much elongated, slender, compressed, its diameter being less than half its depth, which latter is the greatest at the base of the head and origin of the snout. Dorsal fin is about one-third length of the body length of the fish, beginning at the dorsal fin to the dorsal edge, and the mouth is small with oblique, imperfectly developed lips in the figure. The dorsal fin is of moderate length. The dorsal outline from the head to the caudal fin is nearly horizontal and the ventral line is slightly concave from the commencement of the second dorsal fin to the base of the caudal fin. The caudal fin is narrow, a little less than one-sixth of the entire length, and appears to be pointed. The interorbital space is flat and bearing small ridges. The upper lip of the mouth is short, the lower jaw the longer, which is somewhat prolonged the upper line of the head to the hinder tip of the maxillary, as far as far back as the anterior tip of the orbit. Both jaws are armed with small, lanceolate teeth, which are disposed in a single row, not closely set, and there is a short space without teeth on the anterior portion of the lower jaw. There are no small teeth in front of the upper jaw, but it is armed with three long, lanceolate-shaped fangs, which when the mouth is closed are hidden in holes or sockets in the under jaw. The orbit is large, is circular, its diameter is two-thirds of the head and a half diameter to the width of the head.

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HISTORY  
MUSEUM0 1 2 3 4 5 6 7 8 9 10  
cm

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Large dorsal fin is very large, extending  
with close to the second fin and in height  
equals the depth of the body. The second  
dorsal is not so tall as the first, the  
upper margin is slightly concave anteriorly  
and the posterior two thirds is composed  
of seven or eight small finlets,  
but connected by membranes. The anal fin  
is smaller and commences more posteriorly  
than the first dorsal. The ventrals are rudimen-  
tary. The pectorals are small and the  
caudal is emarginate.

Color. Dull teal on the sides and  
black above. Sides silvery clouded with  
green. The under dorsal is dusky with  
iridescent shades and a bluish reflecting  
glow. The dorsal black. Pectorals dusky.  
The anal fin mostly colorless  
except the base.

Habitat. Shallow water.

Native name Haviñdi jukhi.  
They are found in deep water for  
the most part.



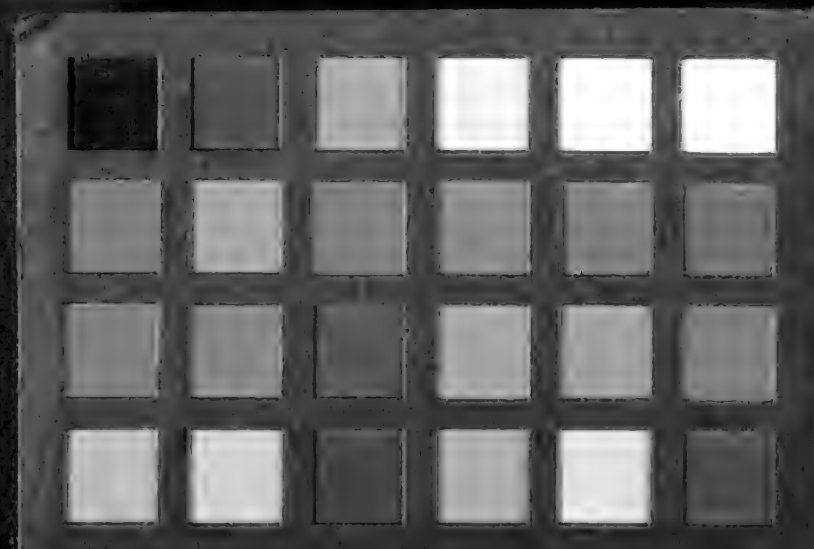
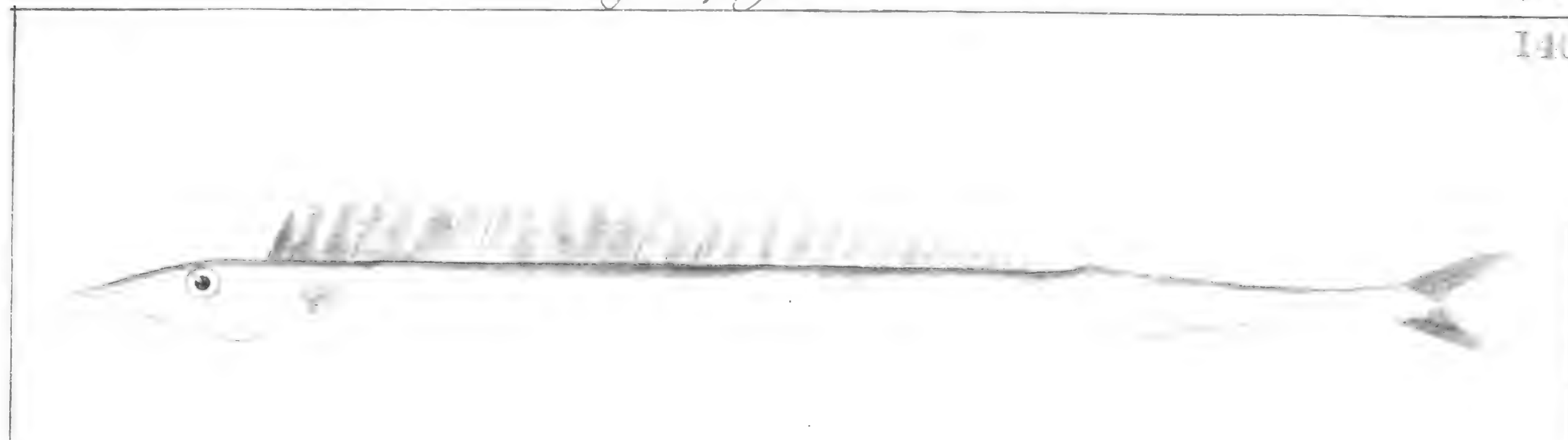
**N**  
NATURAL  
HISTORY  
MUSEUM



*Sempylus serpens*

410

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**N** NATURAL  
HISTORY  
MUSEUM

*Agaveites prometheus*  
*tyemphylus* 470

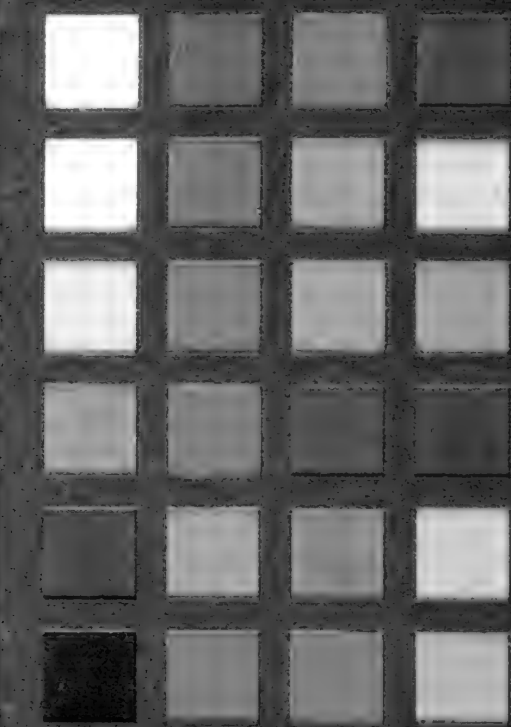
5 1/2; D. 19 1/2, A. 1/2, H. 1/2, L. 1/2.

This species is almost identical to 470, but may be distinguished from the latter by the hind side of the body being the free tail and the lower part dorsal and anal fins. The first dorsal commences some distance in advance of the hinder opercle insertion and the anterior portion of the fin is deeper than in 470.

We never saw but one specimen, which was procured at the mouth of the river. We were told by the fishermen that it was seldom taken and always in very deep water outside the river.

The description I have written up at the time we obtained the specimen, was lost in the wreck at the mouth of the river. We can only afford the above information with a good colored drawing.

NATURAL  
HISTORY  
MUSEUM



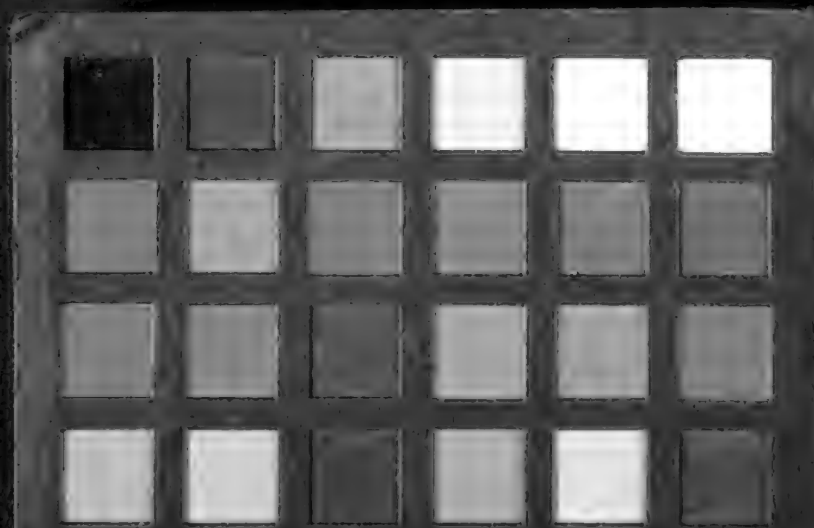


473

147



*Thyrsites promethews*



**N** NATURAL  
HISTORY  
MUSEUM





above, the rays slender, the sixth or seventh  
the longest and the last very short. A pectoral  
fin is present, nearly half the length of the  
body, and is excluded. The height as compared  
to length is as one to six. The second dorsal  
commences close to the hinder termination  
of the first fin, which it considerably over-  
tops, and rapidly tapers away posteriorly,  
presenting a concave upper margin.  
The two hinder rays are nearly separate  
finlets. The anal fin is similar, but  
smaller and shorter on its base. The  
caudal is bifurcate. The ventrals are  
slightly rudimentary, set back rather large.

Color back above, steel blue  
beneath; when dead nearly uniform  
steel blue with large blackish clouds.  
Ventrals silvery, varied with black. All  
the fins blackish.

Length 3 to 4 feet.

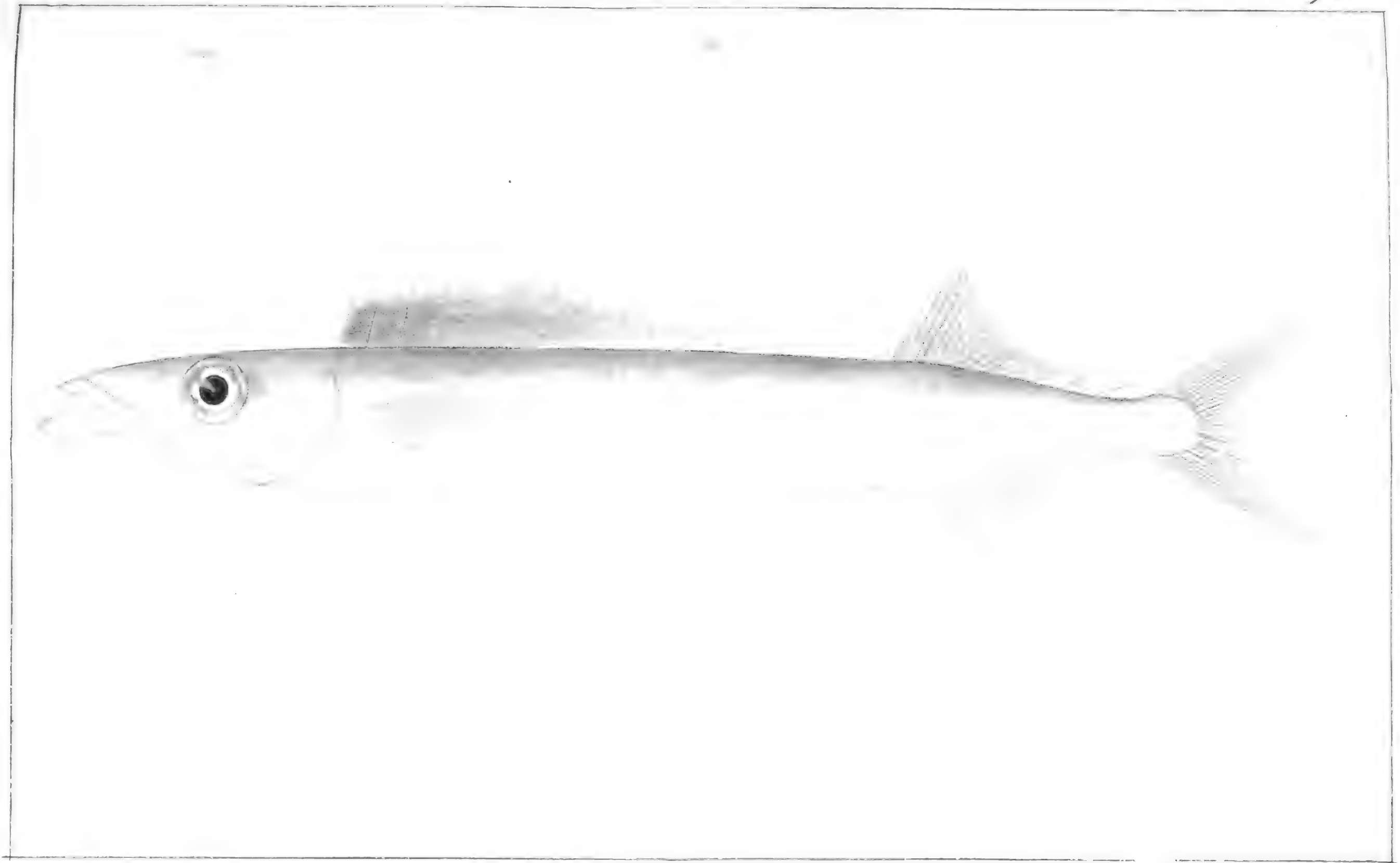
H. C. Cook's Isl.

It is caught in very deep  
water.



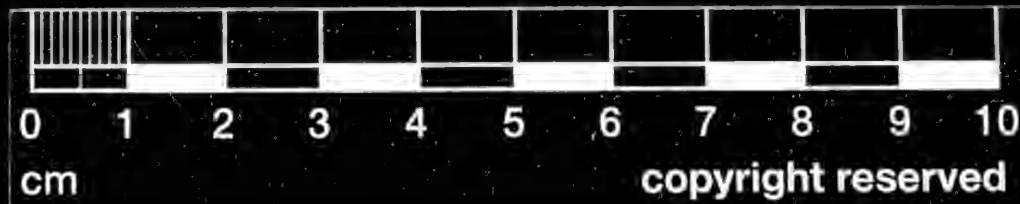
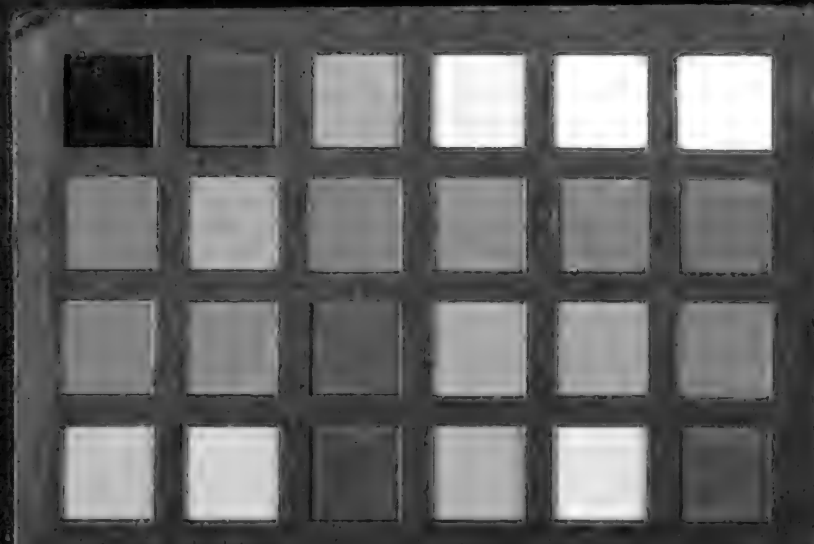
NATURAL  
HISTORY  
MUSEUM

470



*Thysites promethews*

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**N** NATURAL  
HISTORY  
MUSEUM



Scanthurus No 444

L. 9.4, H. 2.5, B. 1.5, T. 1.5, F. 1.5.

This species of Scanthurus is abundant at all the stations in the ... and at all the eastern groups it has the same vernacular name "Narivion".

The depth above the base of the central equals half of the ... of the ... caudal excluded. The ... and ... are very small. The head comprises about two thirds of the total length. The circular eyes are at water surface, between the ... the origin of the dorsal fin.

For shape and proportion of fins see the colored drawings.

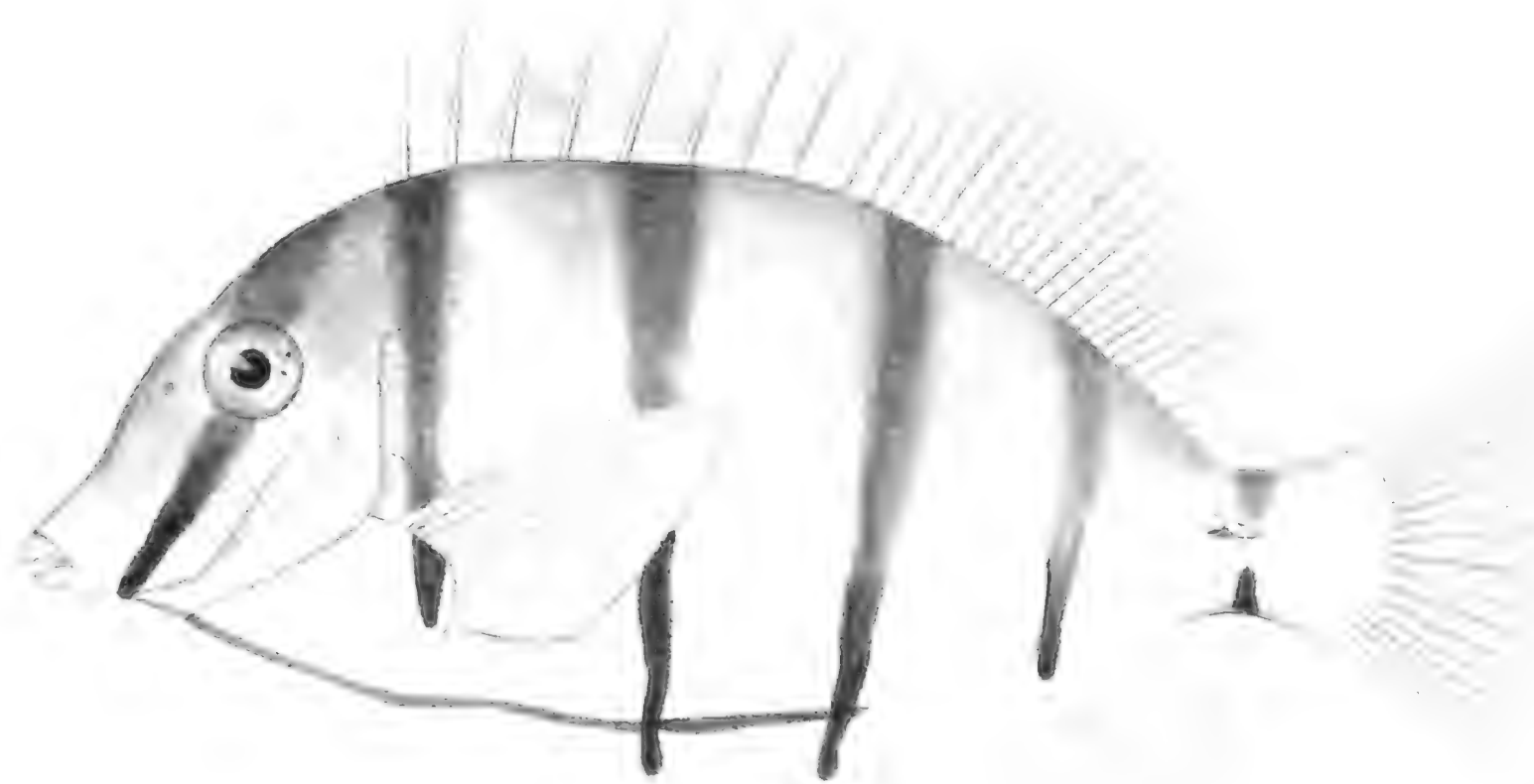
Color greenish white, with darker clouds, and bluish white beneath. Band snuff brown or purple brown. Vides yellowish above, under bluish white shade with dusky, anal bluish white becoming light greenish white beneath. Caudal light greenish white. Pectoral colorless. Dorsal the same color as the upper part of the body.

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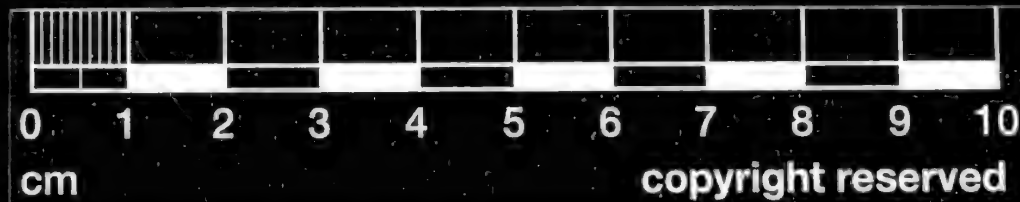
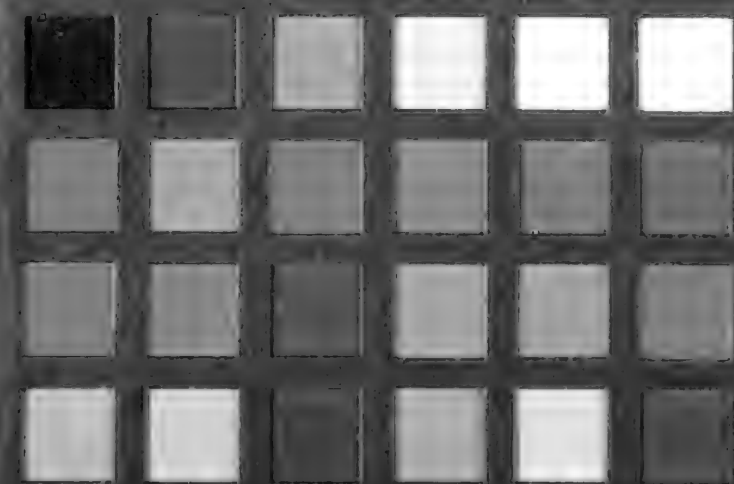
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444

140



*Acanthurus triostegus*



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Scorpaenidae No 453

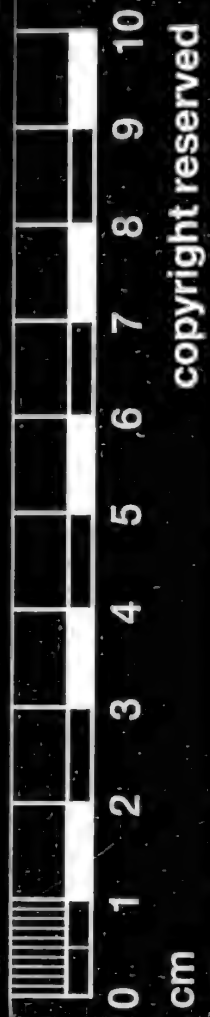
P. 9-20 g. 10-12, 14, 16, 18, 20.

This species is of an oblong-ovate form, the greatest depth being equal to half the total length. The scales are minute and the head is small. The head is very prominent, gibbous upward and forward of the eyes, which latter are large and circular.

The dorsal fin is strong and deep, deepest at the first articulation, which depth equals half the length of the soft portion of the fin. The caudal is emarginate. The anal is deeper than the dorsal, rapidly tapering posteriorly, slightly arching and a little shorter in its base than the soft dorsal.

Color of the recent skin first brownish olive, darker posteriorly, more or less mottled with darker lines, and the hinder half of the body decorated with rather closely set small whitish spots which are encircled with blue black rings, the spots larger posteriorly. Head with three vertical diffuse bands of a whitish or creamy hue, the first at the base of the head, the second which is the

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MUSEUM



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under the first behind the base of the  
pectoral and the third a little behind  
the middle of the body. Breast and lower  
part of head bluish white. Fins varied  
in the brown, pectorals slate color. Ventrals  
yellow mottled with slate. Dorsal olive  
brown or dusky brown. The posterior two-  
thirds covered with dots like the body.  
Caudal blackish, the basal third and  
part of the peduncle white. Anal olive  
brown becoming blackish outwardly and  
spotted like the body.

Length 6 inches.

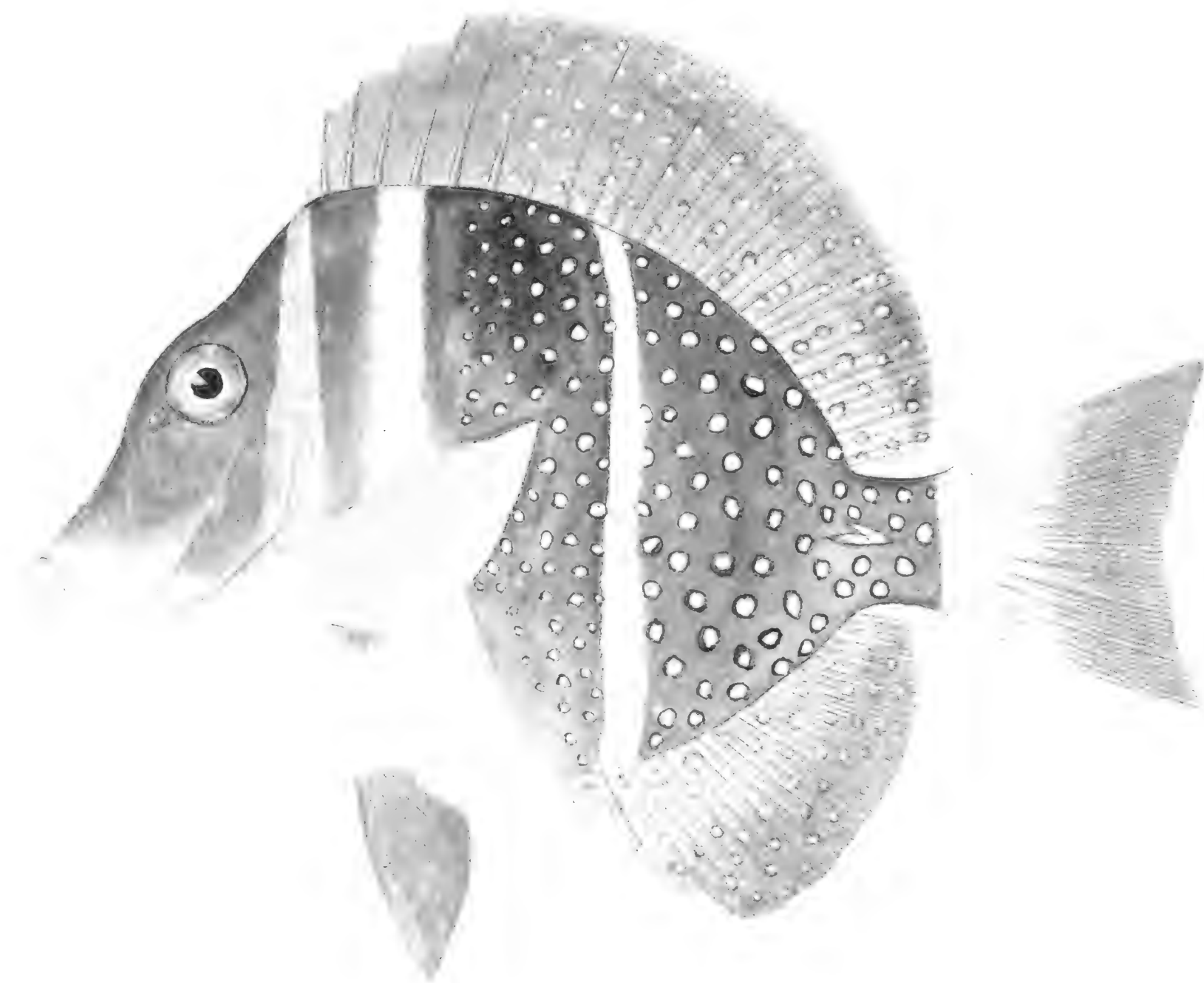
Hab. Sandwich Is. Society Is.  
Kingman Is.

No time name at the former group  
Hap at the latter. Debeben

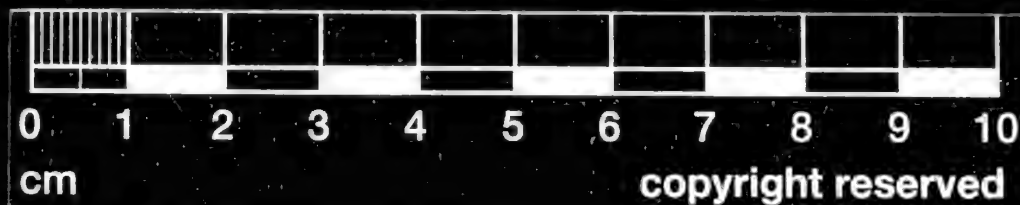
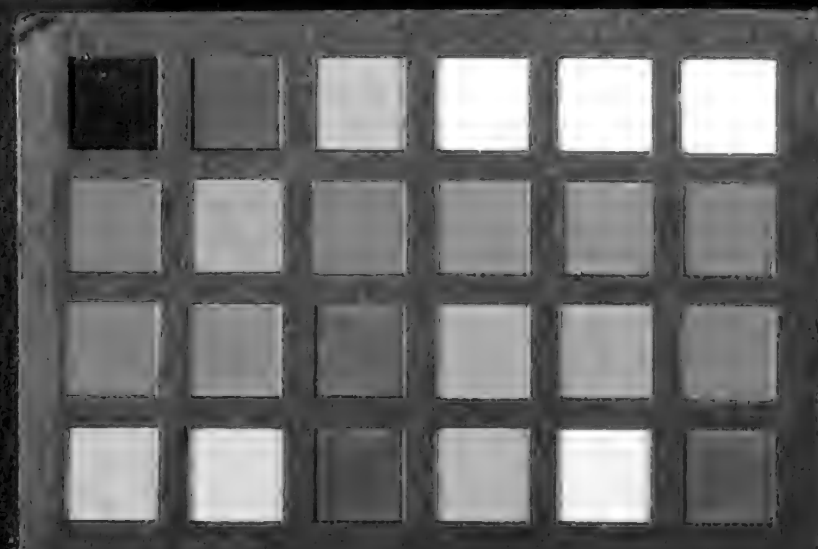


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HISTORY  
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*Acanthurus guttatus*



Genus *Leanthurus*, Sapp.

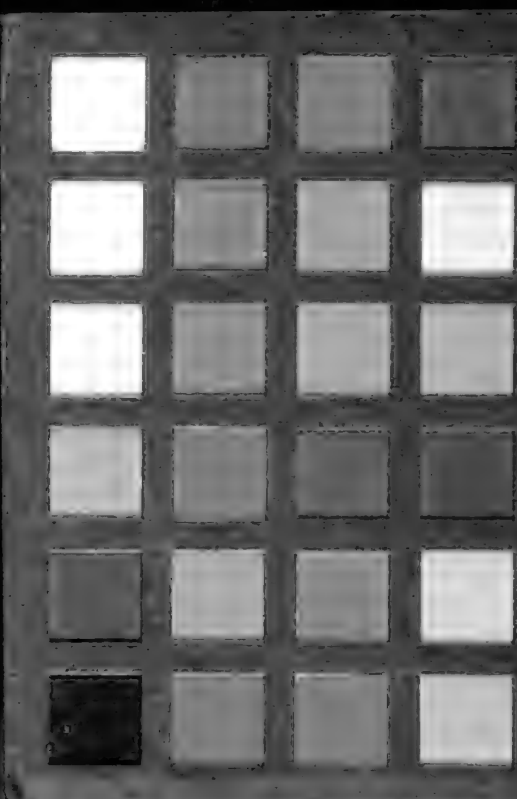
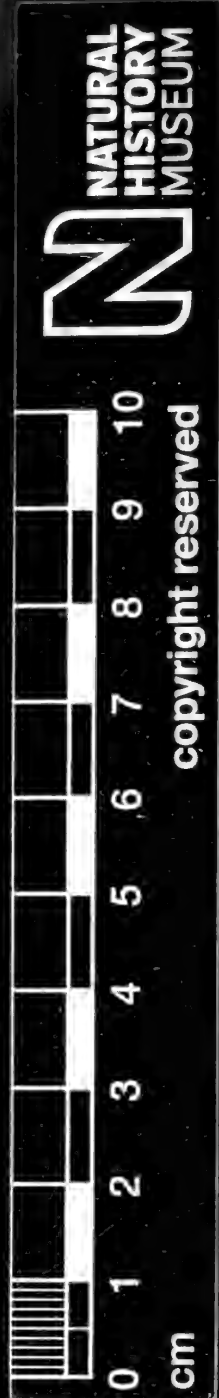
102

Body erect, slender, very graceful. Head short, with a short project. Eyes large, in the head, with a slight oblique position, almost of a level with the base of the bill. Mouth small. Teeth strongly marked, with a small space in a closely set range. Tail small, with a subventral spine, which can be folded in a loose groove. Branchial rays 10. 2 pairs. Dorsal fin 10. Ventrals 10. Pectorals 10. The head is short, with the throat arching a little, the body being generally perpendicular, but flexing to the pectorals, and then to the tail, and then to the bill, by a motion of the head, or less elongation.

We have noted the following species, as being most common, and noted, to the best of which is the *Leanthurus bicoloratus*.

*Leanthurus bicoloratus*, Sapp.

B. 4, 6. 4-27; A. 2-2; L. 1-1; T. 1.6; B. 4, 1, 2, 1, 1. This large species has a very long body, which can be deflected to the end of a long line. The body equals about half of the head, the caudal fin is small. The head is slightly convex on its upper line, and is raised up to the dorsal fin. The dorsal fin is nearly vertical. The pectoral fin is situated at a lower level than the head, distant from the head of the body.





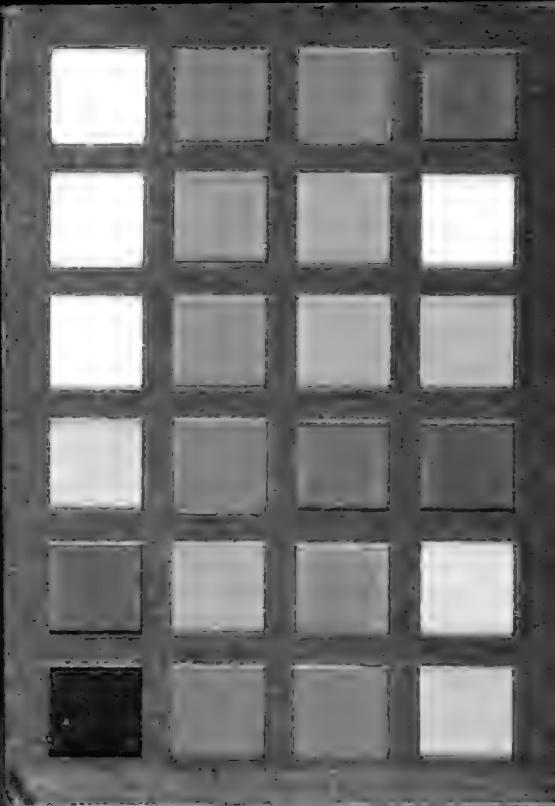
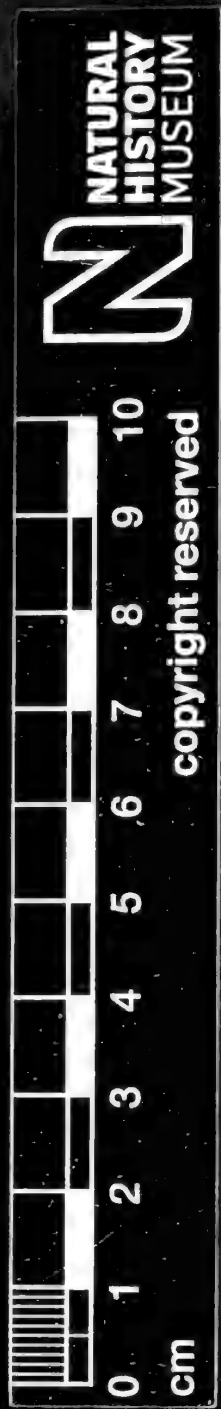
The following is a description of a type  
 specimen of the species in question. The first  
 part of the specimen is the soft part, which  
 is a small, rounded, slightly flattened  
 structure, about 1 mm in length and 0.5 mm  
 in width. It is a pale yellow color and is  
 attached to the base of the pin. The second  
 part of the specimen is the hard part, which  
 is a small, rounded, slightly flattened  
 structure, about 1 mm in length and 0.5 mm  
 in width. It is a pale yellow color and is  
 attached to the base of the pin. The third  
 part of the specimen is the soft part, which  
 is a small, rounded, slightly flattened  
 structure, about 1 mm in length and 0.5 mm  
 in width. It is a pale yellow color and is  
 attached to the base of the pin. The fourth  
 part of the specimen is the hard part, which  
 is a small, rounded, slightly flattened  
 structure, about 1 mm in length and 0.5 mm  
 in width. It is a pale yellow color and is  
 attached to the base of the pin. The fifth  
 part of the specimen is the soft part, which  
 is a small, rounded, slightly flattened  
 structure, about 1 mm in length and 0.5 mm  
 in width. It is a pale yellow color and is  
 attached to the base of the pin. The sixth  
 part of the specimen is the hard part, which  
 is a small, rounded, slightly flattened  
 structure, about 1 mm in length and 0.5 mm  
 in width. It is a pale yellow color and is  
 attached to the base of the pin. The seventh  
 part of the specimen is the soft part, which  
 is a small, rounded, slightly flattened  
 structure, about 1 mm in length and 0.5 mm  
 in width. It is a pale yellow color and is  
 attached to the base of the pin. The eighth  
 part of the specimen is the hard part, which  
 is a small, rounded, slightly flattened  
 structure, about 1 mm in length and 0.5 mm  
 in width. It is a pale yellow color and is  
 attached to the base of the pin. The ninth  
 part of the specimen is the soft part, which  
 is a small, rounded, slightly flattened  
 structure, about 1 mm in length and 0.5 mm  
 in width. It is a pale yellow color and is  
 attached to the base of the pin. The tenth  
 part of the specimen is the hard part, which  
 is a small, rounded, slightly flattened  
 structure, about 1 mm in length and 0.5 mm  
 in width. It is a pale yellow color and is  
 attached to the base of the pin.



Length. 18 inches.

Habitat. Kingmill Is. Society Is.

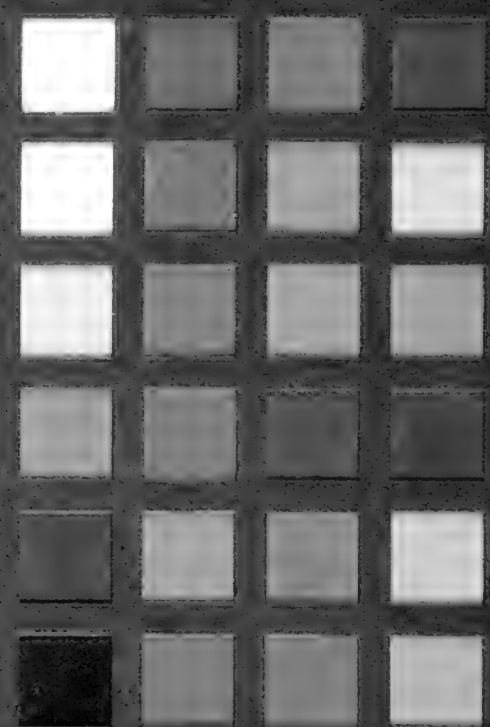
Remarks This species is not by any means common. At the Kingmill Islands it is called "Perepa". Scales not represented in drawing.







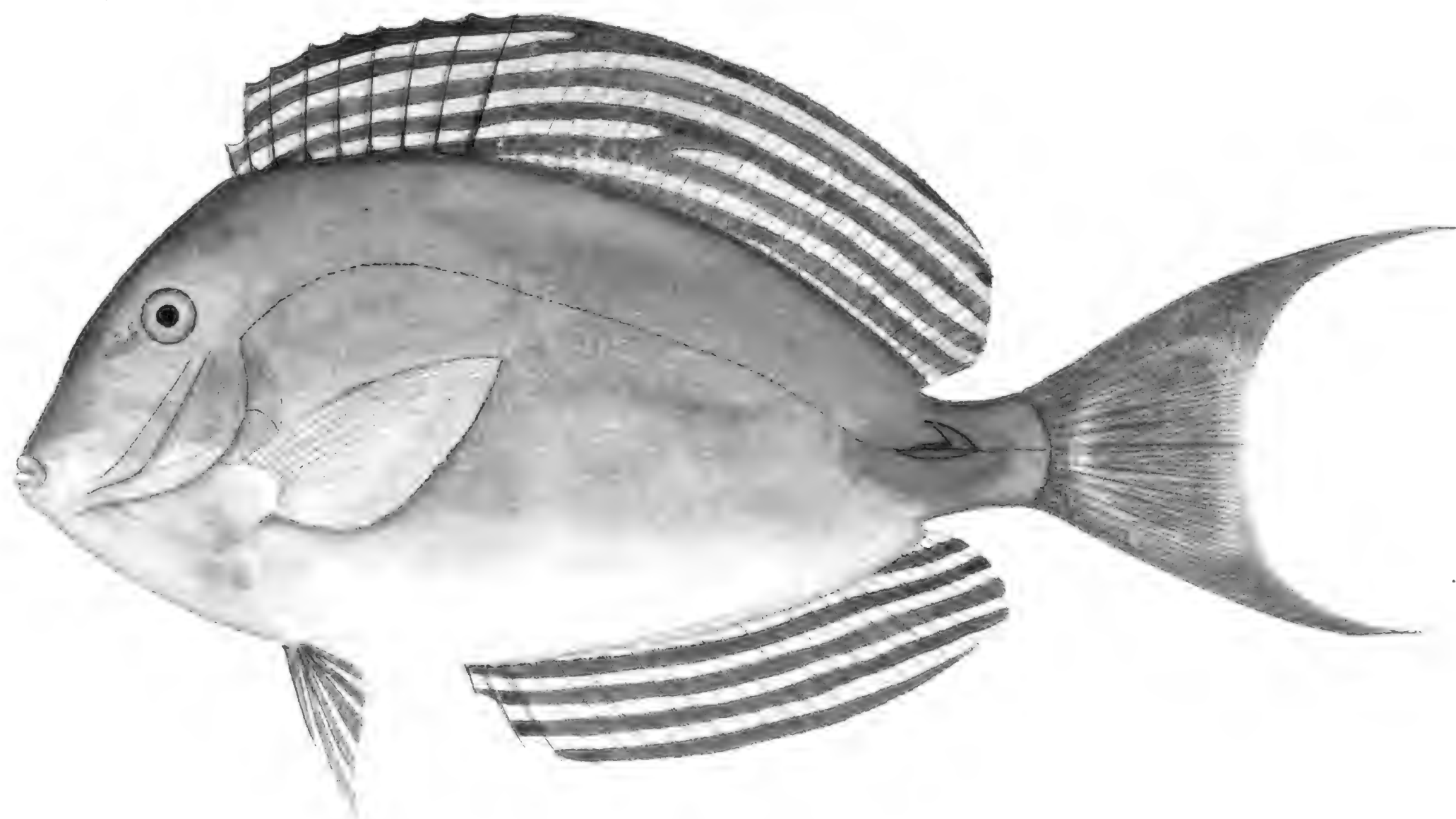
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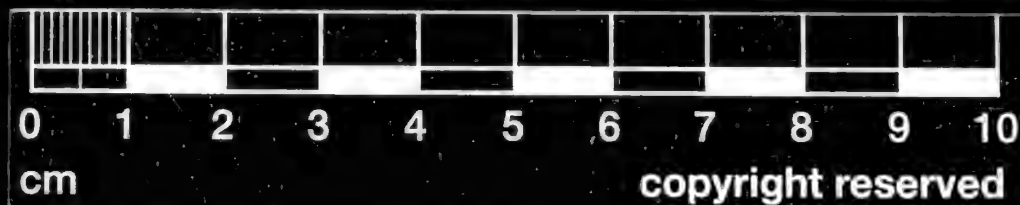
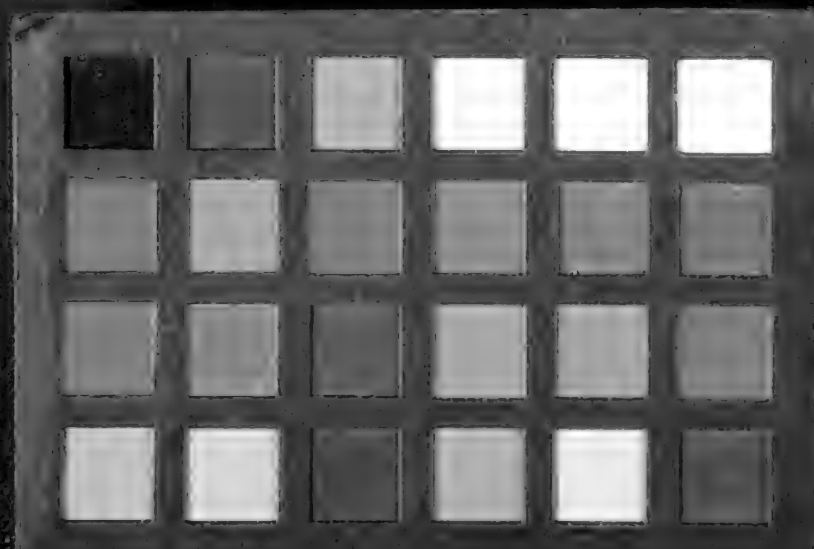
Notiz für den Lithographen

Seine copirten Briefe sollen gut als  
Stift. Linien unverändert unter dem Profil  
H. Andrus gebracht. In dem H. Andrus, sollt  
man die Briefe so, wie sie selbst zu veröffentlichen;  
In jedem H. Andrus, muss auf der fünften Seite  
H. Andrus, wie es möglich ist.

Am besten wäre es, wenn der Lithograph ein  
Folienblatt H. Andrus von der Originalität entwerfen  
kann.



*Acanthurus blacki*



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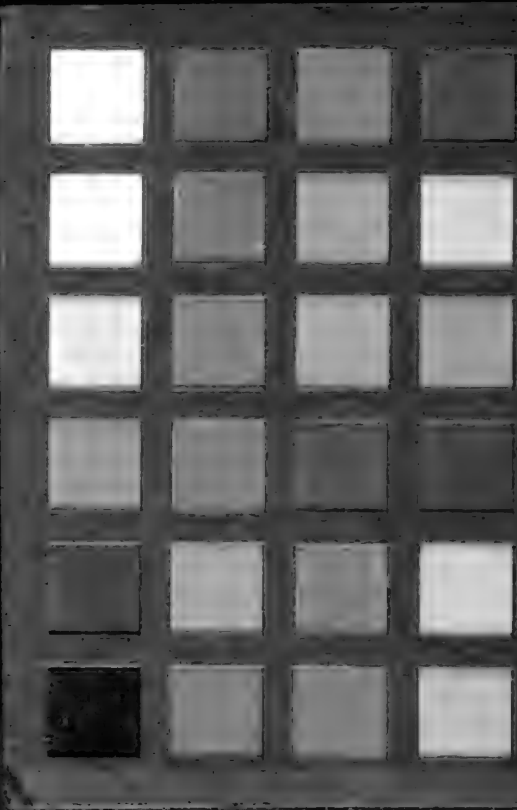
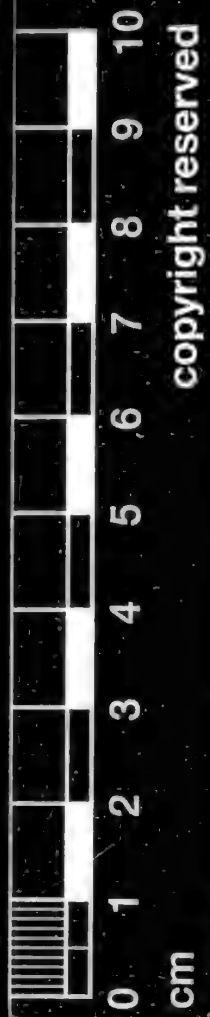
*Acanthurus lineatus*, Lin.

Length 1.3-2.5; 4.1-5; 11.6; 6.3, 1, 14, 12.

The general outline of this beautiful *Acanthurus* is oval. The greatest depth of the body is just one half of the total length, caudal excluded. The head equals half the greatest depth of the body and is prefrontally convex above. The eyes are circular in shape, their diameter entering about five times in the length of the head, and three times in the space between the angle of the mouth and their own orbits.

The caudal is emarginate shaped, the forks long and slender. The ventrals are long, acuminate, and their tips reach the seventh anal ray. The dorsal fin commences a little in advance of the hinder margin of the opercle, its spiny portion is the same length as the pectorals and the eighth spine is in height equal to the length of the spiny portion of the fin. The greater height of the soft part is equal to one-fourth the length of the whole body. The anal fin starts from a point one-fifth

NATURAL HISTORY MUSEUM



Length 10 inches. Dorsal spine and is shaped like a lanceolate.

Color yellow with a violaceous streak down the lower part, the two colors divided by a narrow violet or violaceous line which extends from the mouth to the base of the caudal fin. The sides of the yellow ground is lineated with light blue, black marginal bands, the arrangement of which can be best understood by consulting the figures. Dorsal cupreous varied brown. The dorsal fin is dark olive, gradually becoming black posteriorly. Caudal black, with a large luniform light green patch, margined anteriorly with light blue and dark blue posteriorly. The anal fin is of a slate color edged with black and the base of pectoral brown. Ventrals orange and olive green, ventrals orange red, anteriorly bordered with black or blue-black.

Length 10 inches.

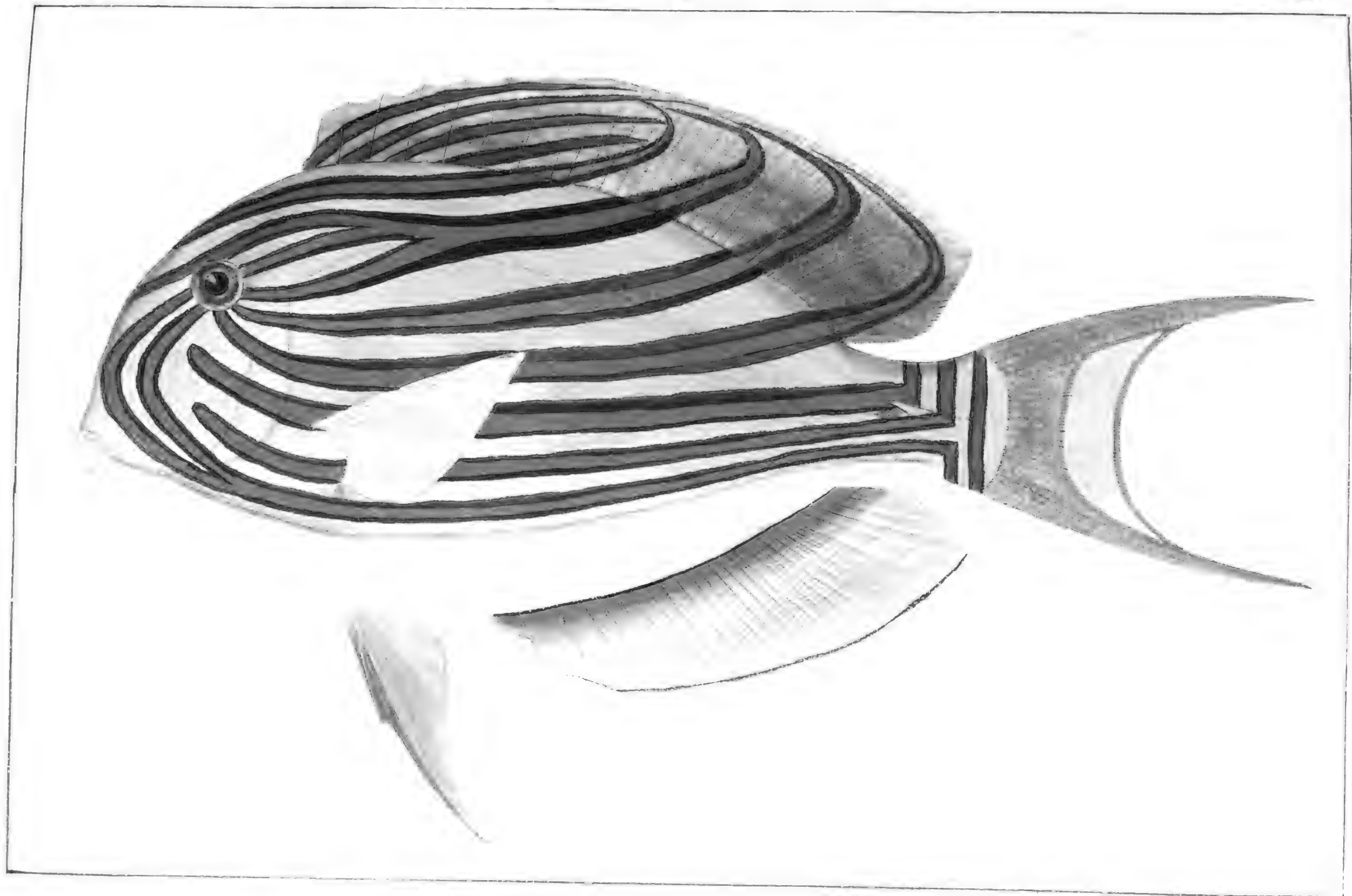
Hab. all the Pacific from the south of the equator.

Native name at Tahiti "Marou"

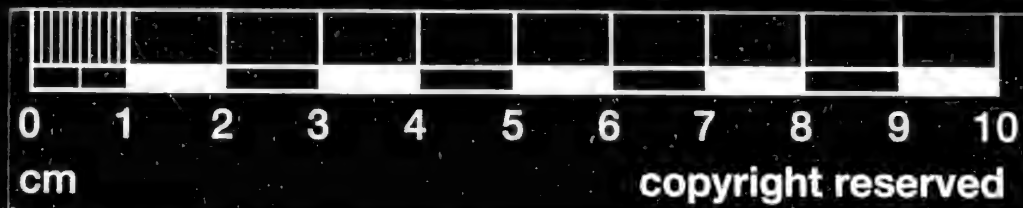
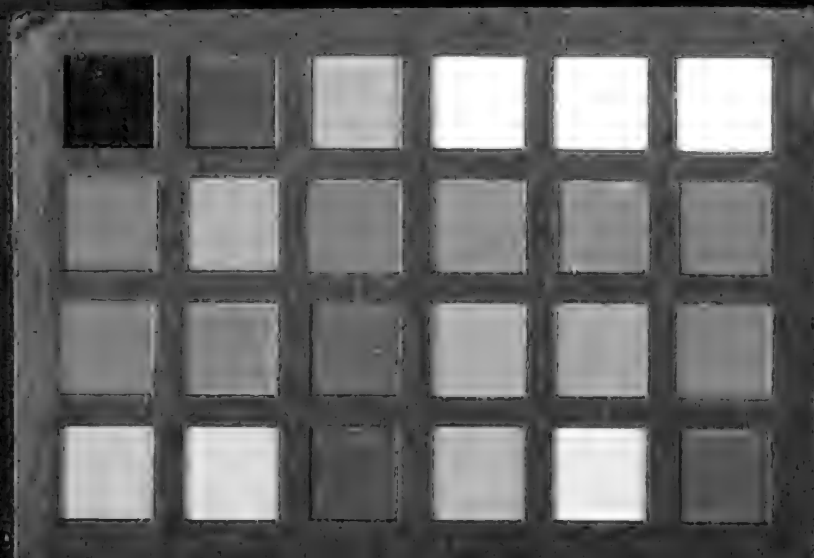
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*Acanthurus lineatus*







479 153  
The head fish brownish  
blue, passing into green on the abdomen,  
and becoming in the least and lower  
part of the head. The former ground  
color is decorated with close flexuous  
longitudinal blue lines; those on the  
head oblique. Spinal sheath margined  
with black, of large yellow spot marks  
the base of the pectorals and a band  
of the same blue passes from the  
origin of the lateral line, through the  
eye and over the interocular space.  
Sides yellow. The dorsal and anal are  
yellowish white, each ornamented by a  
blue basal band, the former edged with  
black above, and the latter with blue,  
and an intramarginal black line.  
Ventral blackish, the central portion  
white, spotted with black, ventral pale  
steel blue, with close brown rays. Pectorals  
dark grey.

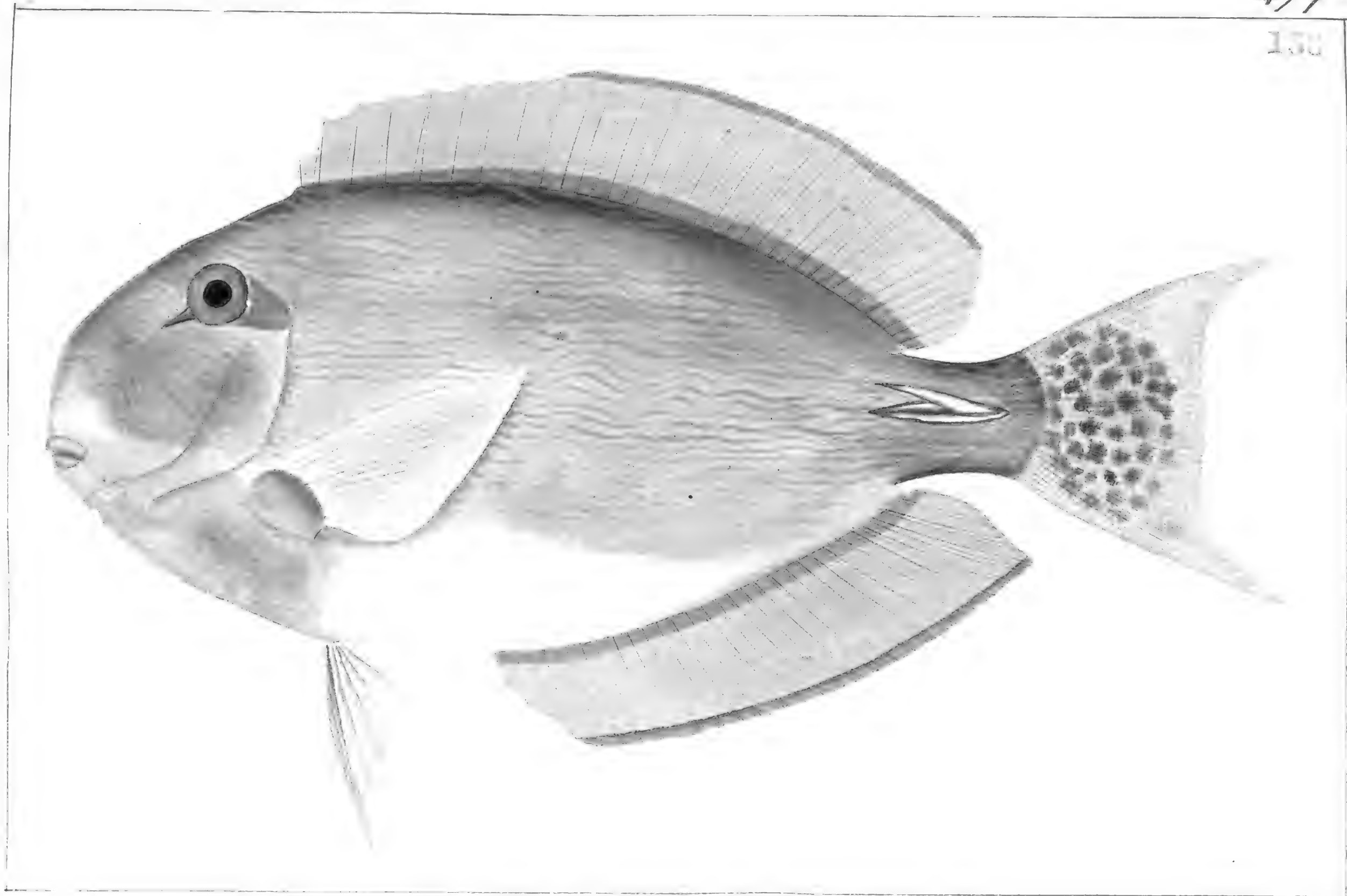
Length 10 inches.  
Hab. near the lake  
native name "Hane".

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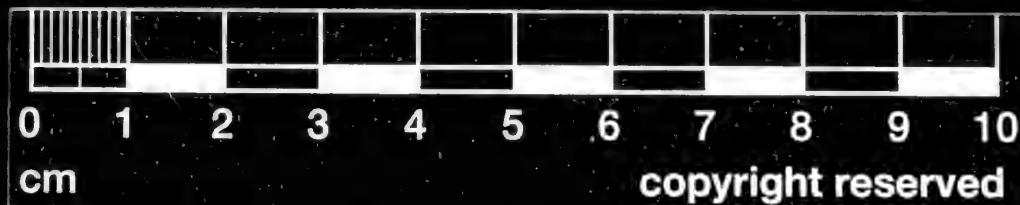
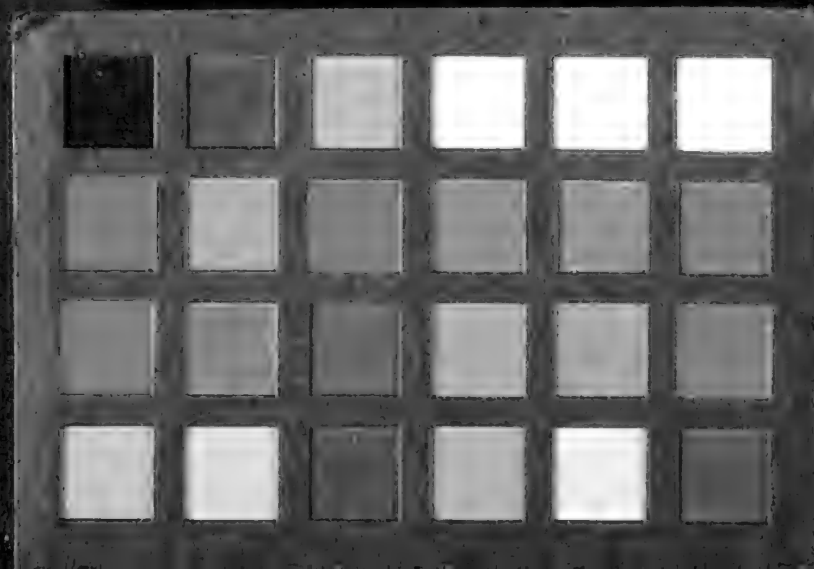
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138



*Acanthurus dussumieri*



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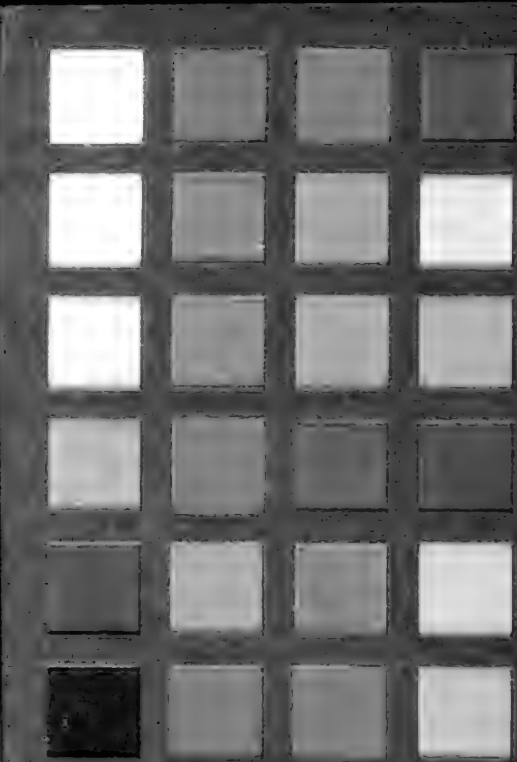
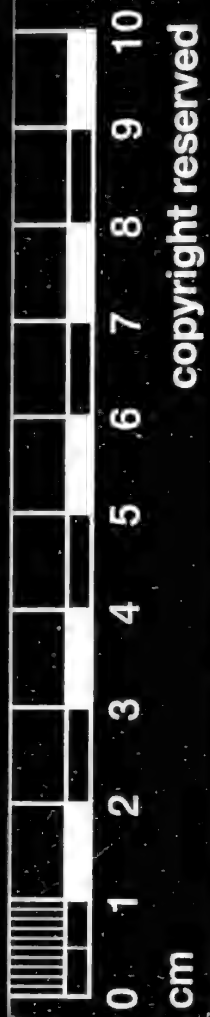
B. 5.9-2.7.18. - 2.7.18. 1.1.18. 1.1.18.

The species is of the same size and the same shape as the last one, but more than half the diameter of the snout to the mouth. The body is more or less oval, the dorsal fin is up to the middle of the body, the pectoral fins are small, the pelvic fins are small, the anal fins are small, the caudal fins are small. The eggs are small, the larvae are small, the juveniles are small.

The soft dorsal fin is small, the soft ventral fin is small, the soft pelvic fin is small, the soft anal fin is small, the soft caudal fin is small. The soft dorsal fin is small, the soft ventral fin is small, the soft pelvic fin is small, the soft anal fin is small, the soft caudal fin is small. The soft dorsal fin is small, the soft ventral fin is small, the soft pelvic fin is small, the soft anal fin is small, the soft caudal fin is small.

Color yellowish brown, the head is brown, the body is brown, the fins are brown. The head is brown, the body is brown, the fins are brown. The head is brown, the body is brown, the fins are brown. The head is brown, the body is brown, the fins are brown. The head is brown, the body is brown, the fins are brown.

NATURAL  
HISTORY  
MUSEUM



All the fins of the same color as  
the body, gradually becoming darker  
towards the tips. The posterior  
dorsal fin is large, but is bluish gray  
and has black spots on the lower  
border. The anal and pectoral fins  
are length 2 inches.

Herbichthys herberti Gar.

Described by Gar., raising the question  
as to the existence of a buff color, which  
is the color of the living fish  
young, from the which they, Gar.

has a black line through the eyes for those species  
of the genus, but can be as large  
as a more or less long snout, finer scales,  
and deep brown anal fins; which  
is distinct from the former has  
a five spine, rays, while in the true  
form there are only nine spines  
in the dorsal fin. Some of them have  
an arrangement of the dorsal fin a large  
portion of the dorsal fin which  
is a sort of bone.

324 Herbichthys typicus, Gar.

D. 25; A. 21; P. 14; L. 3, 1, 2, 7, 1, 3.

The young of this species is often  
found in the water. It is a very  
common fish in the water.

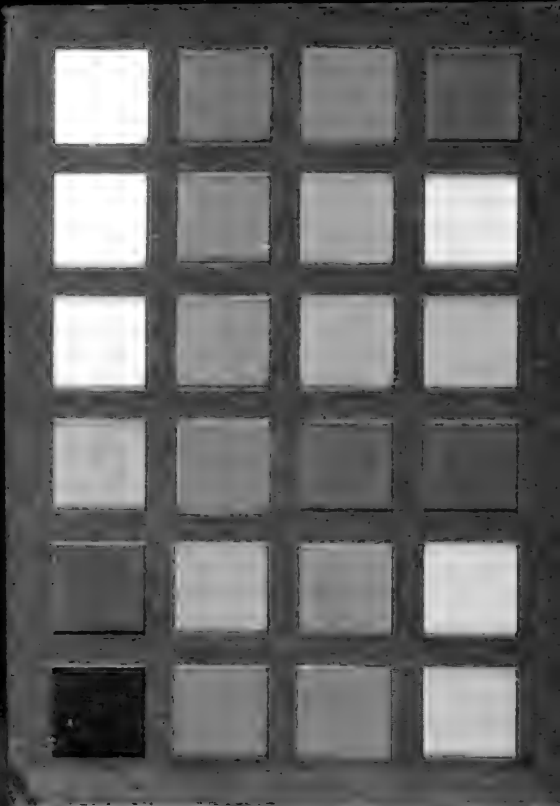
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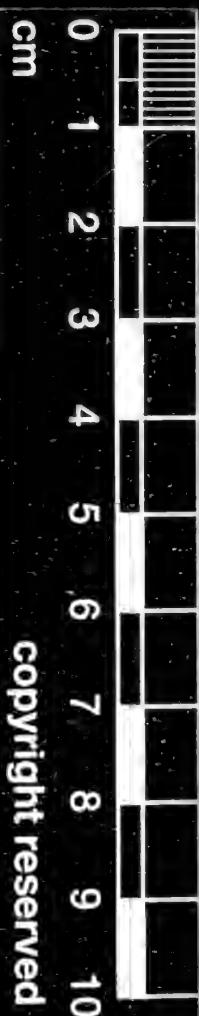
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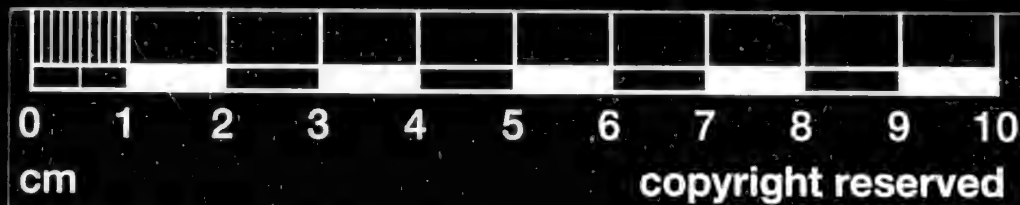
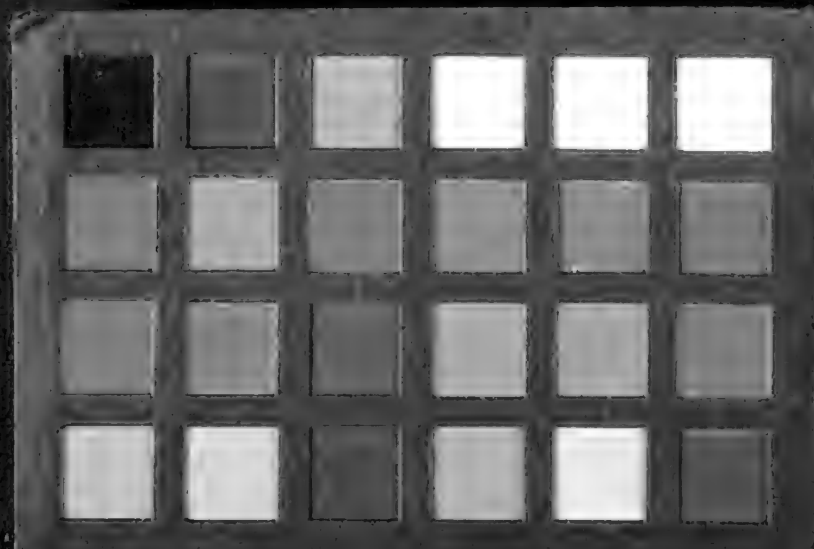


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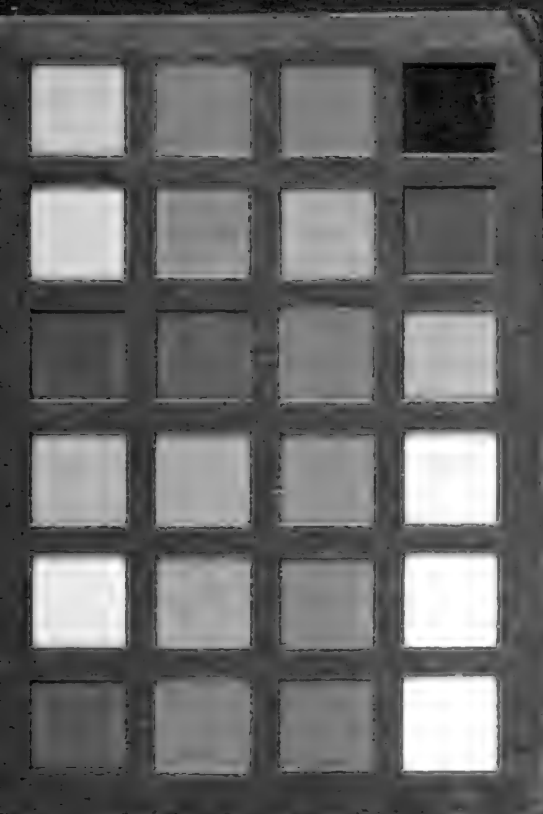


*Acanthurus lineatus*









cm

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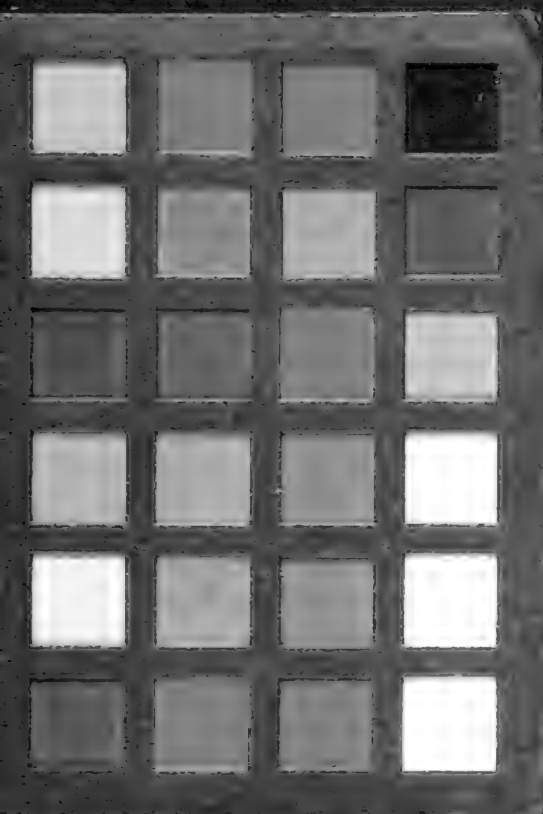
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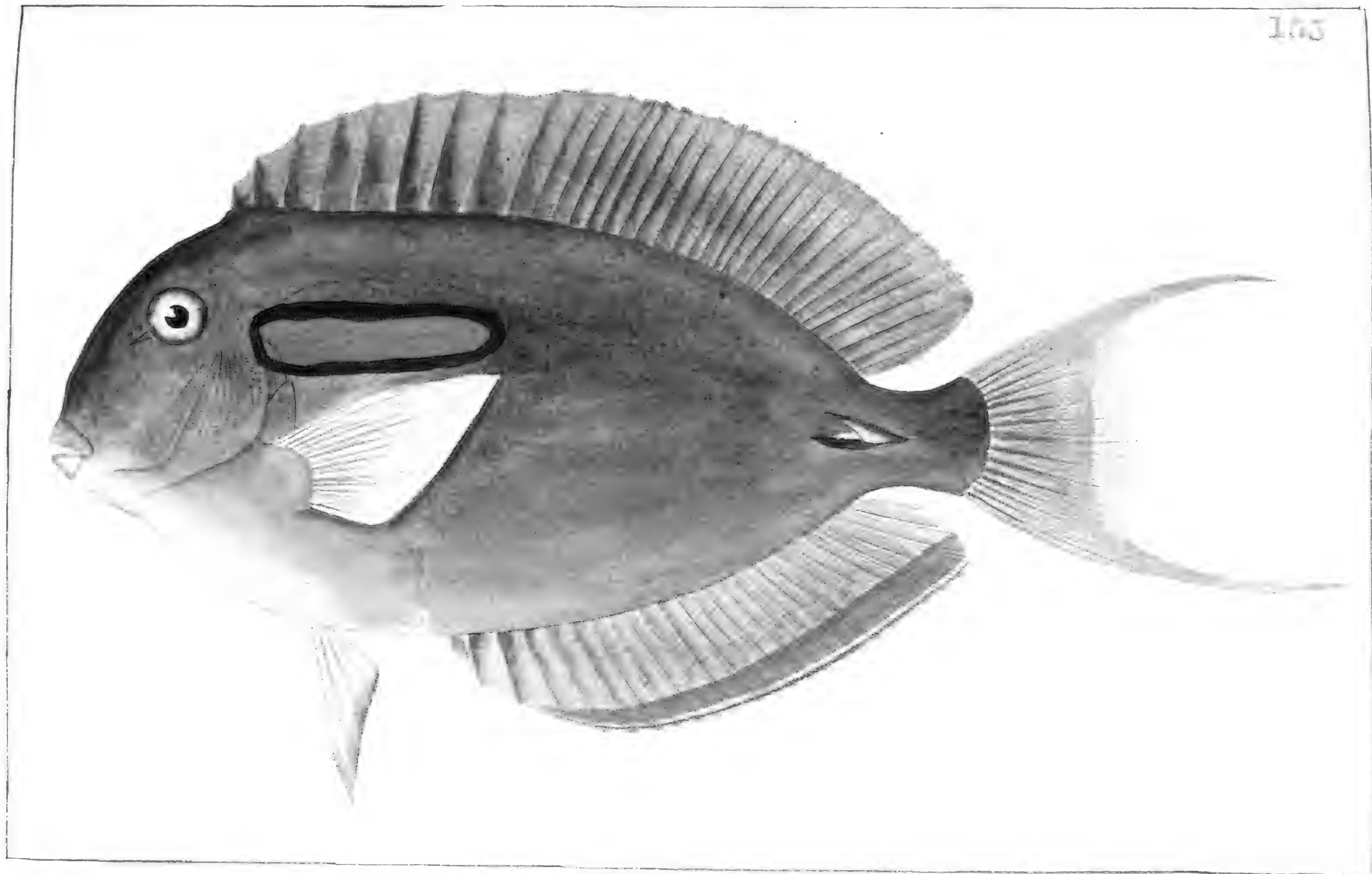
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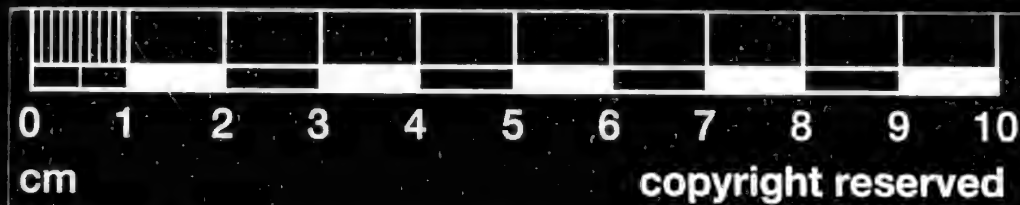
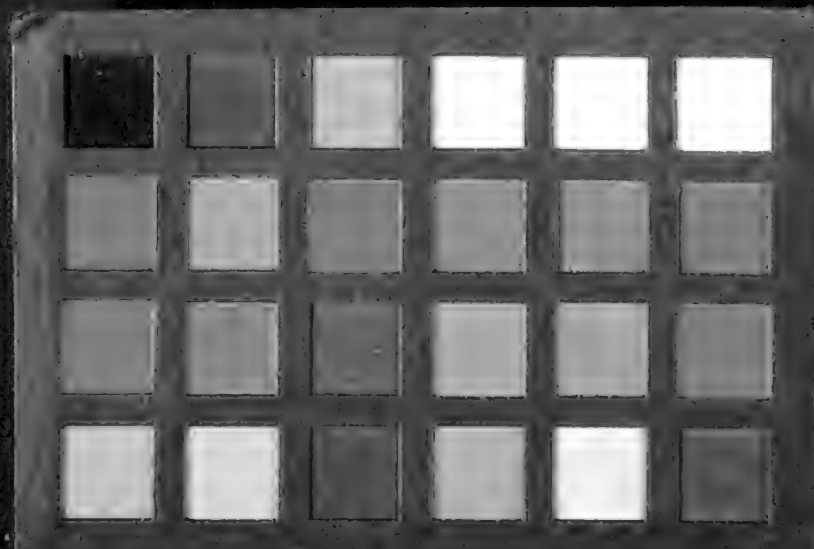
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The twenty-fourth  
The twenty-fifth  
The twenty-sixth  
The twenty-seventh  
The twenty-eighth  
The twenty-ninth  
The thirtieth

446

163



*Acanthurus divaccus*



**N** NATURAL  
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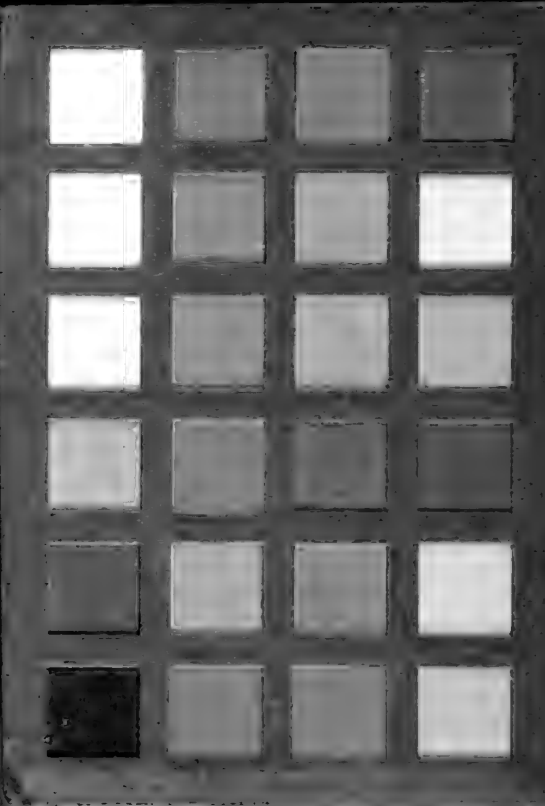


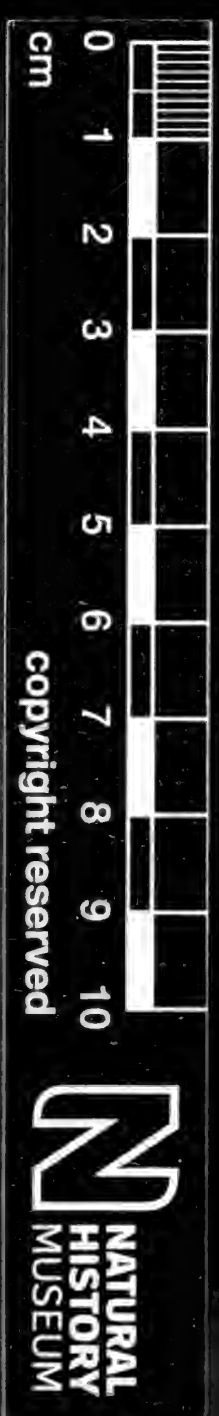
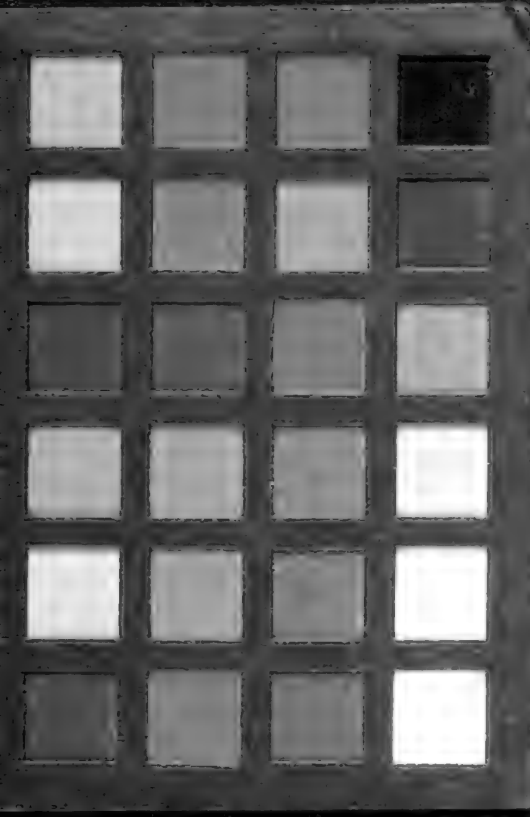
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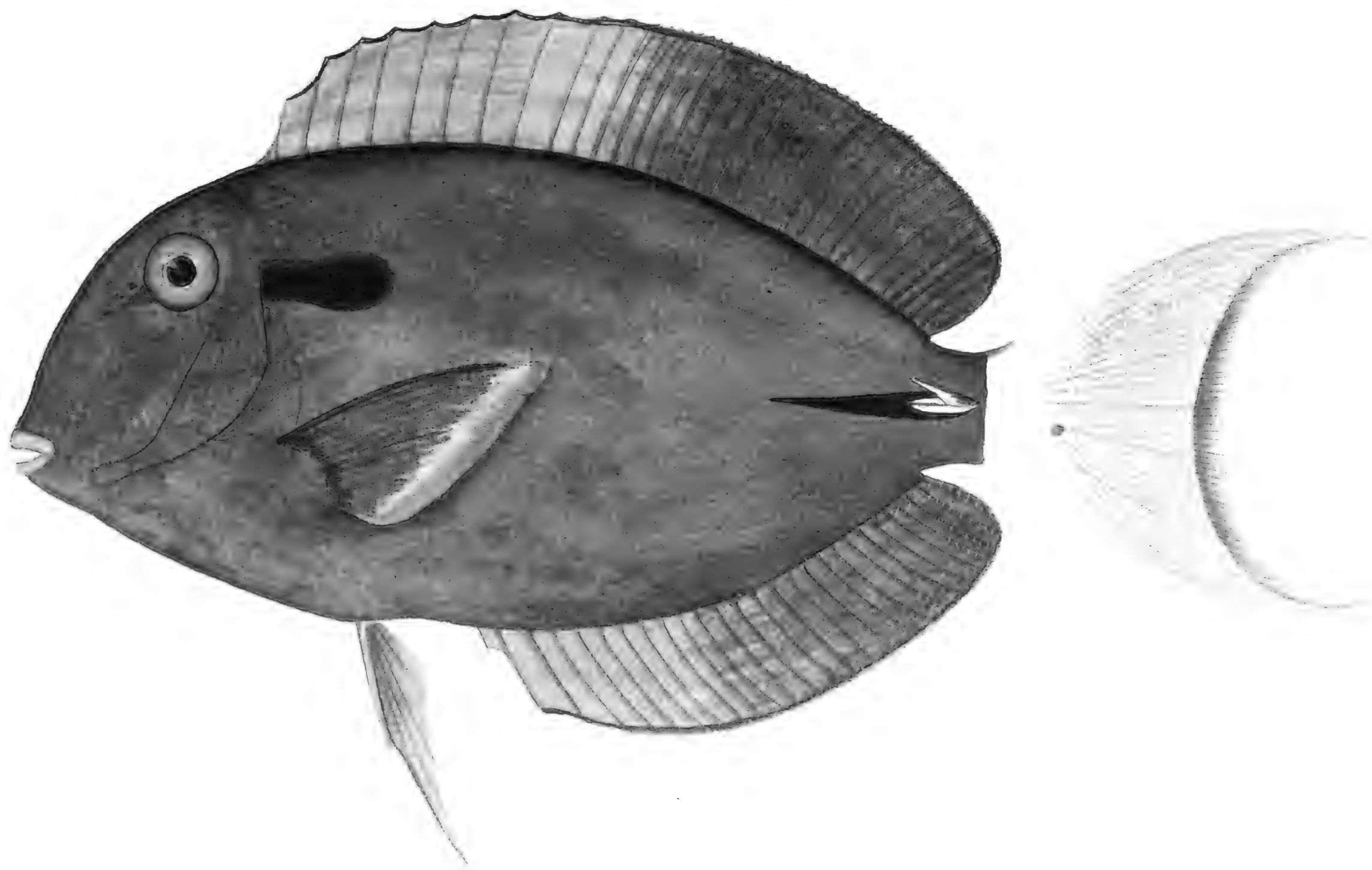
Handwritten notes, possibly "Handwritten"



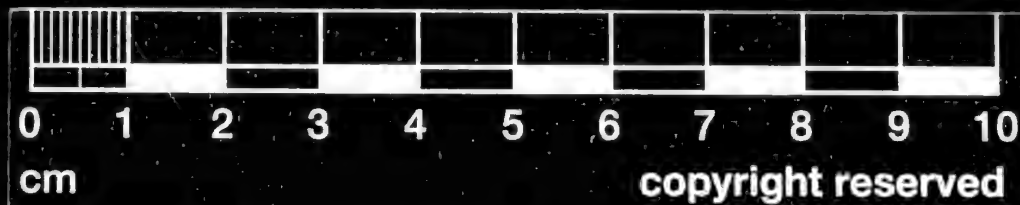
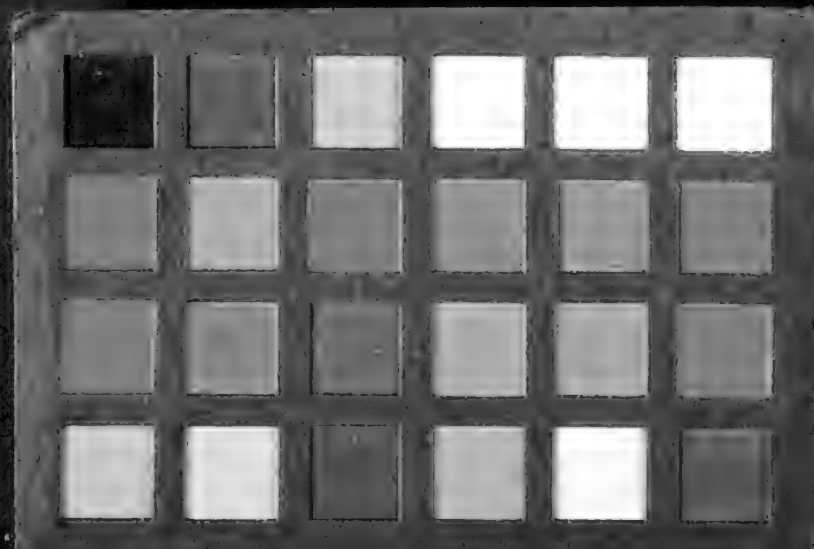


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*Acanthurus grahami*



Length - 1.5 in.

157

Habitat - Biting, with 1/2 in. length

Hemiphaedusa - This species is found in the

mountainous regions of the Himalayas

It is called "Terepau" by the natives of the region

*glaucoptera*

240 *Stenothemus* *glaucoptera*

Length - 1.7-2.2; 4.8-2.8; 1.1-1.2; 1.1-1.2; 1.1-1.2

*Stenothemus* *glaucoptera*, *Stenothemus* *glaucoptera*

*Stenothemus* *glaucoptera*, *Stenothemus* *glaucoptera*

*Stenothemus* *glaucoptera*, *Stenothemus* *glaucoptera*

*Stenothemus* *glaucoptera*, *Stenothemus* *glaucoptera*

*Stenothemus* *glaucoptera*, *Stenothemus* *glaucoptera*

*Stenothemus* *glaucoptera*, *Stenothemus* *glaucoptera*

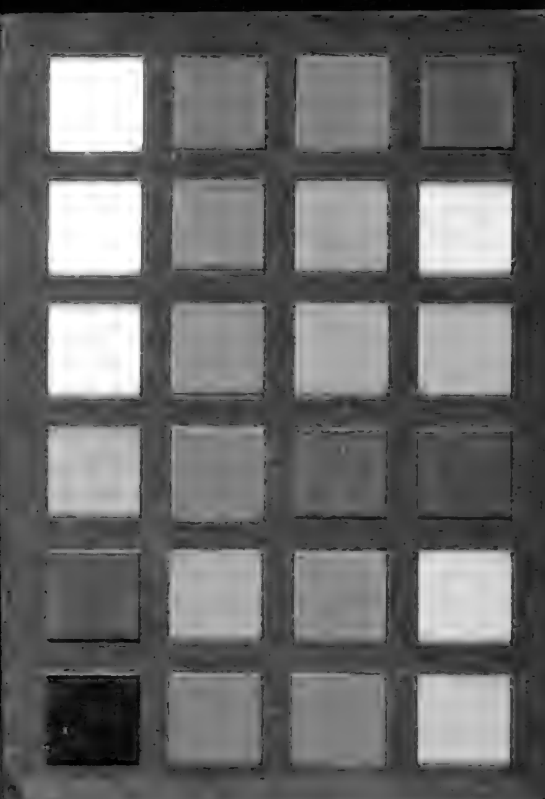
*Stenothemus* *glaucoptera*, *Stenothemus* *glaucoptera*

*Stenothemus* *glaucoptera*, *Stenothemus* *glaucoptera*

This species is of the *Stenothemus* group, the length of the body is considerable more than half of the total length, the caudal exelusion is very long, that we have not seen in the *Stenothemus* group. The head is small, about a depth of the total length, the profile is rather flat, the eye is small. From the slightly prominent head, the line of profile is very slightly rising up to the vertex, the angle of about 70 degrees, the color is black, and is similar to the *Stenothemus* group, the *Stenothemus* group.

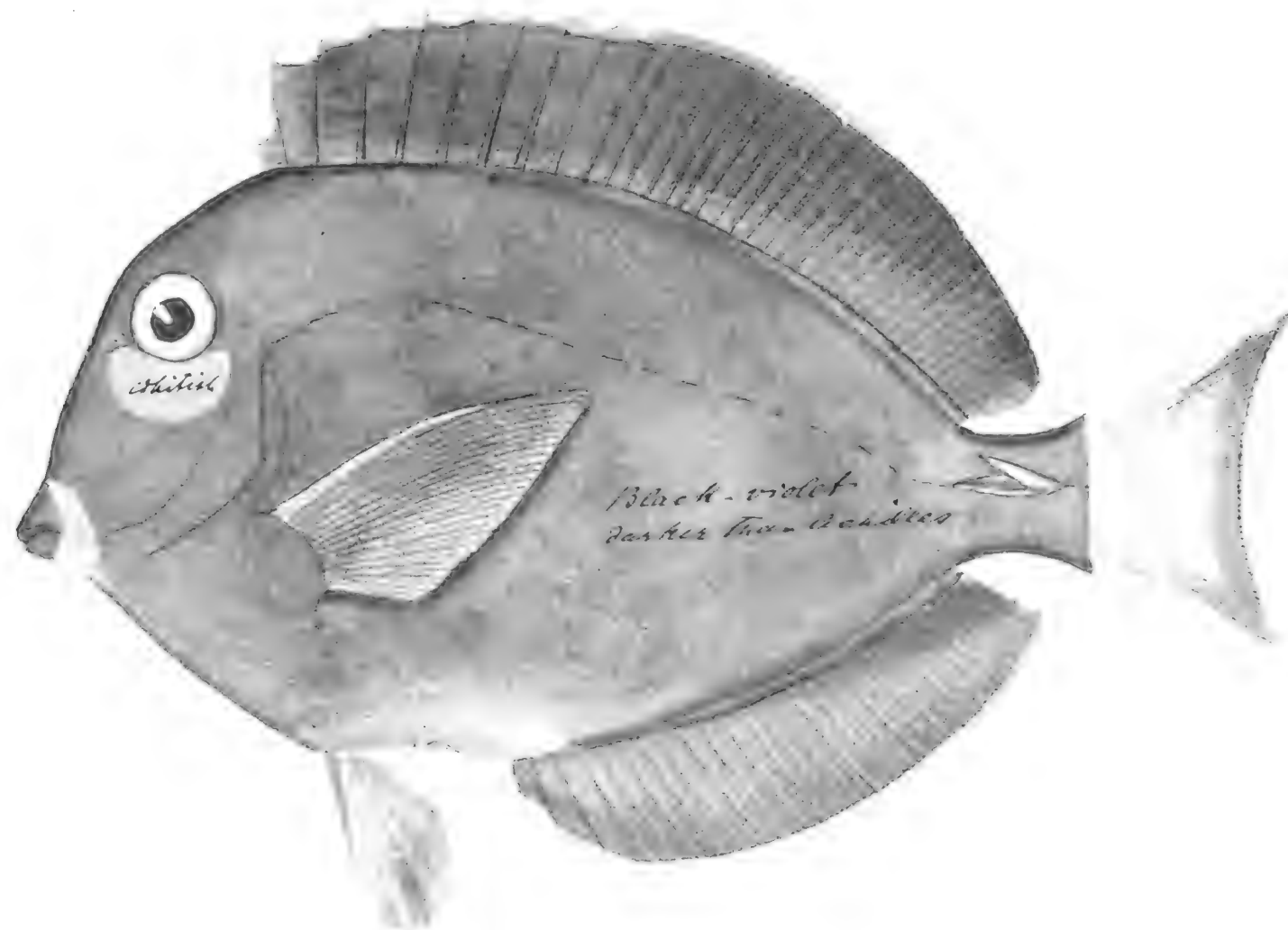
NATURAL HISTORY MUSEUM

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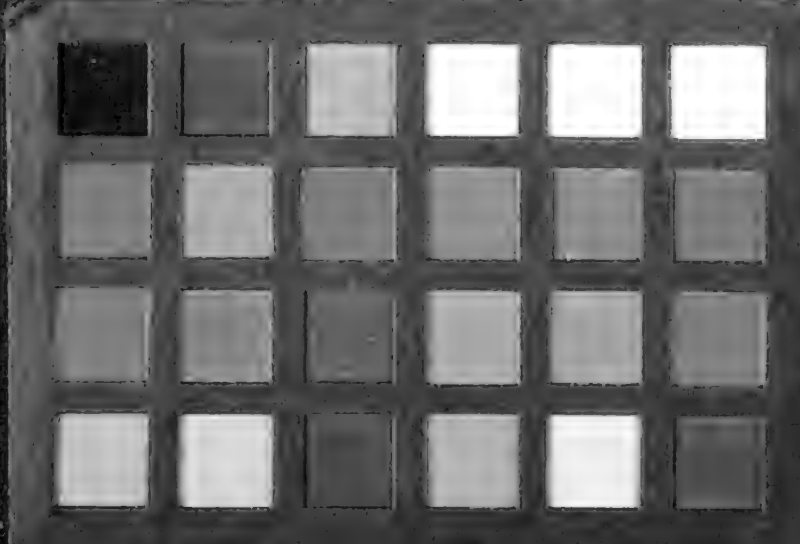








*Acanthurus glaucoparcus*





*various*

*Length 110 mm.*

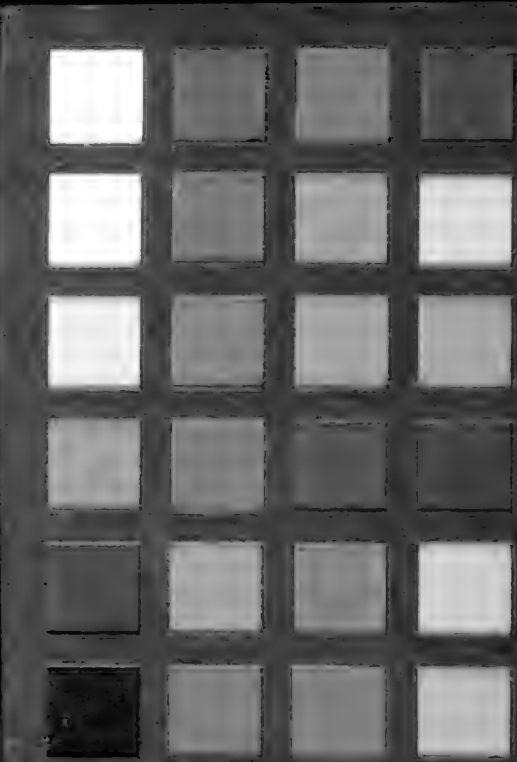
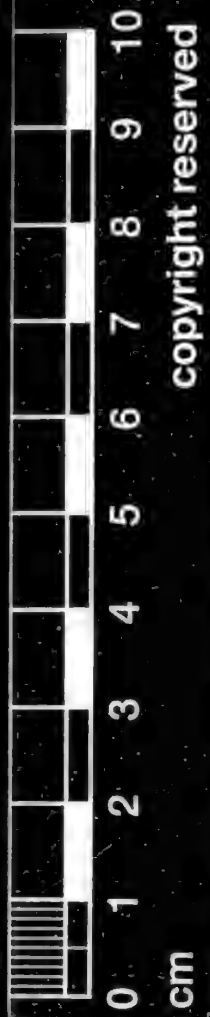
*Depth 15 mm.*

The greatest depth of the body as compared to the total length of the fish is as two is five. The head comprises a fifth of the total length. The eye is sub-circular in shape and its greatest diameter contains three times in the length of the head once in the interocular space. The scales are very small.

The dorsal fin extends over a base a little more than half the entire length of the fish. Its posterior portion is composed of eight rays and comprises a third of the fin. The soft part as well as the anal fin is similar in length to the dorsal. The caudal fin comprises about a fourth of the length of the fish and is concave in its border measuring the rest a narrow, pointed one. The pectorals a trifle exceed the fin in length.

Color light olivaceous yellow, with an orange spot above the base of the pectoral fin. The lower eye lid is clear colorless and a bluish vertical blue-black spot marks the anterior margin of the gill cover. The orange line may be seen on the ventral fin and the

NATURAL  
HISTORY  
MUSEUM



snout is encircled by a white ring. The  
irides are blue color. The vertical fins  
are of a dark olive color, and the caudal  
is broadly margined behind with orange-  
yellow. Dorsals yellowish olive, mottled  
with blue color. Pectorals orange-yellow  
with blue color bases.

Length 8 inches.

Hab. - Society Is.

A very nice specimen.



**N**  
NATURAL  
HISTORY  
MUSEUM

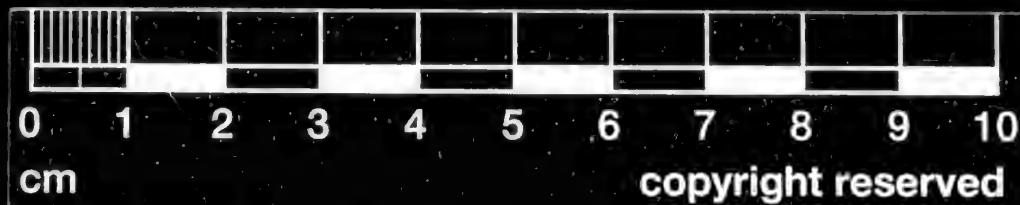
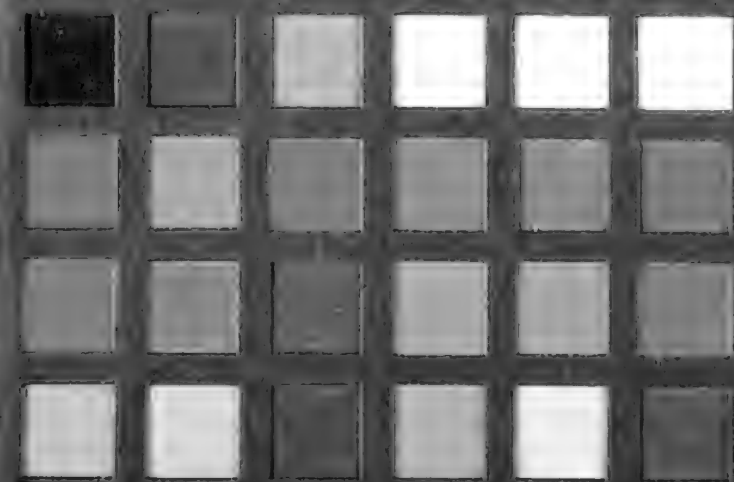


435

138



*Acanthurus celebicus*



**N** NATURAL  
HISTORY  
MUSEUM

Acad. 1885, 1886

Acanthurus no 441

D. 9-31; A. 3 28; P. 11-15; V. 12; C. 21; L. 12; H. 12; W. 12

The head comprises about one fourth of the total length, and includes the greatest depth which is at the commencement of the soft portion of the dorsal fin, is a little more than half of the entire length of the fish, excluding the caudal fin in the measurement. The head is very proscarpate, rising up to the occipital region at an angle of  $60^\circ$ . The eye is sub-circular, smaller than the diameter of the snout and broader from the angle of the mouth. The scales are very minute. The large red spot is smooth and not in the dorsal and anal fins are white in outline, rather deep and the vertical lines rays are distinct. The caudal has the two angles prolonged into slender white tips. Ventrals acute, pointed.

Color of the living fish is dark violet or violet-blue, which changes to a dark brownish black when dead. A pale spot encircled the snout, which in some examples is orange or red, by the blue or bluish green brown green under the chin. A large white mark under the

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HISTORY  
MUSEUM

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just under the posterior part of the  
body, sides brownish or bluish gray. The  
vertical lines the same color as the  
body, the soft portion of the dorsal and  
anal with a narrow bluish white or  
light blue edging and each bears a  
<sup>perennial</sup> basal streak edged light blue, which tapers  
away anteriorly. The caudal is ornamented  
with a large peristomial and uniform  
spot, and the hinder part of the fin  
is white. The pectorals are light violet,  
and the ventrals are the same hue, with  
the anterior margin rich blue.

Length 4 inches

Hab. - All the Polyesian Isles

cm

0 1 2 3 4 5 6 7 8 9 10

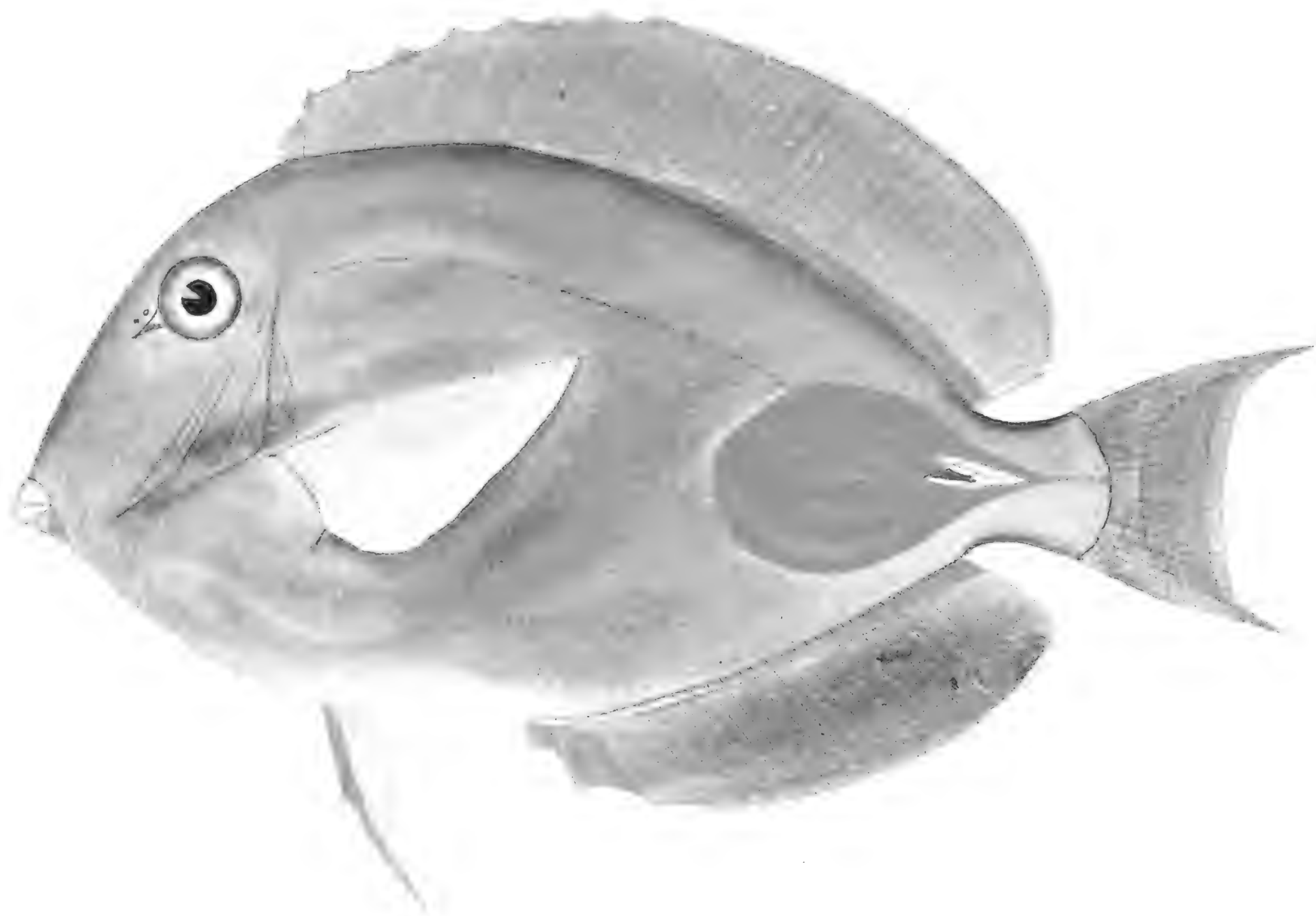
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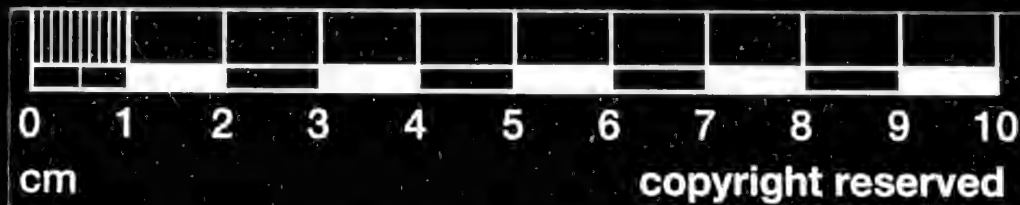
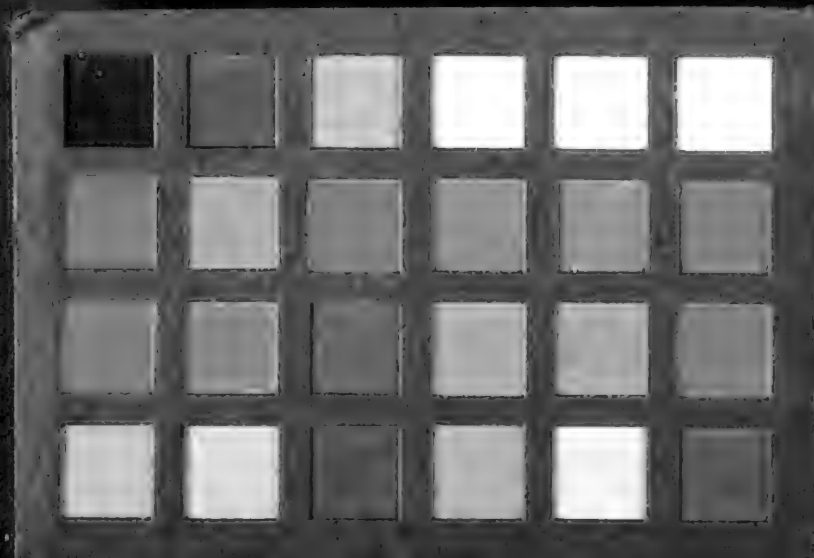
NATURAL  
HISTORY  
MUSEUM

441

150



*Acanthurus achilles*



**N** NATURAL  
HISTORY  
MUSEUM



Acanthura hepatica, Linn.

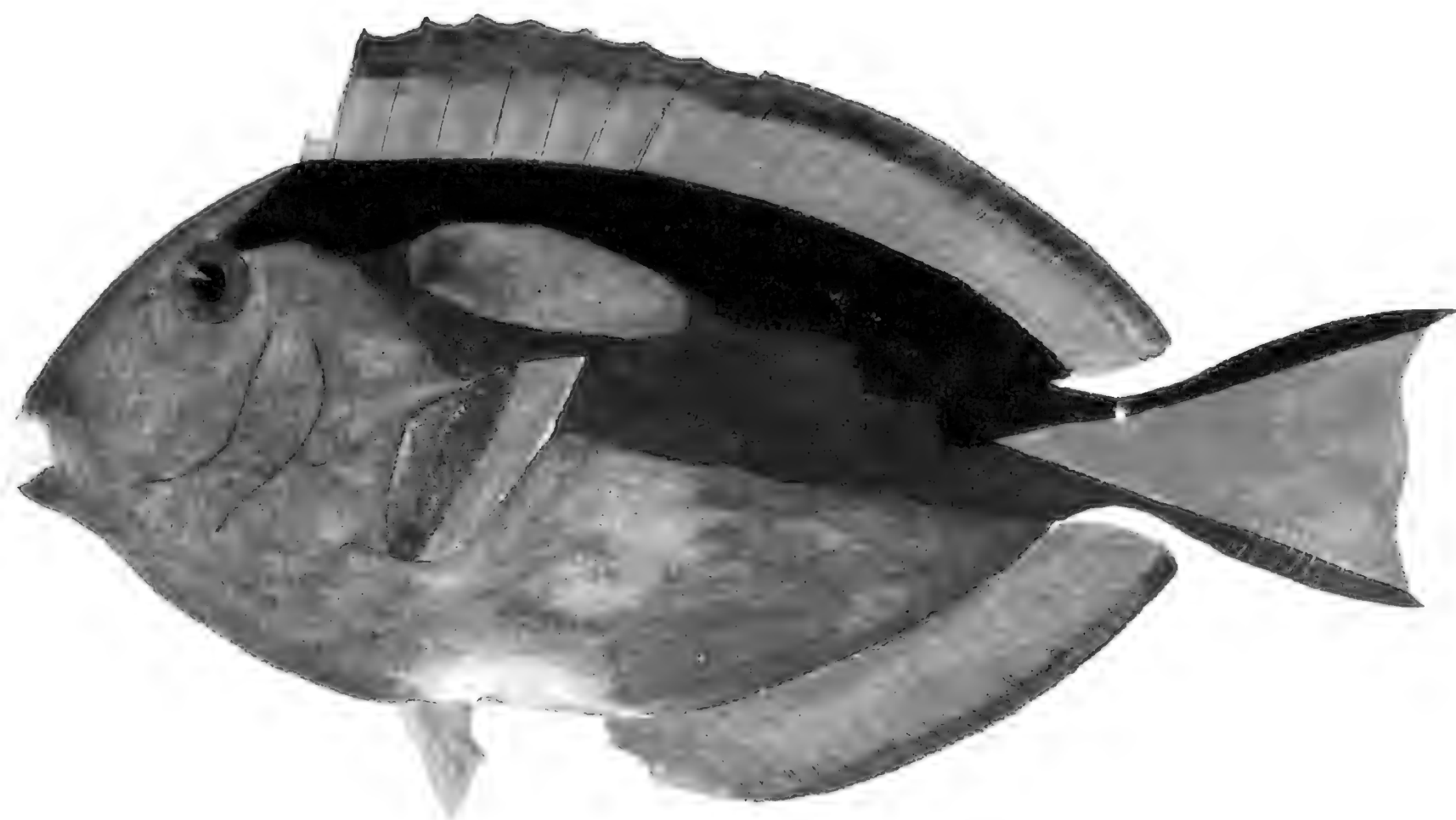
The following description was made  
from two examples collected at the  
Kingsmill Island. I present the appearance  
when alive.

I cannot give any further account  
of this well known species as I made  
no notes at the time.

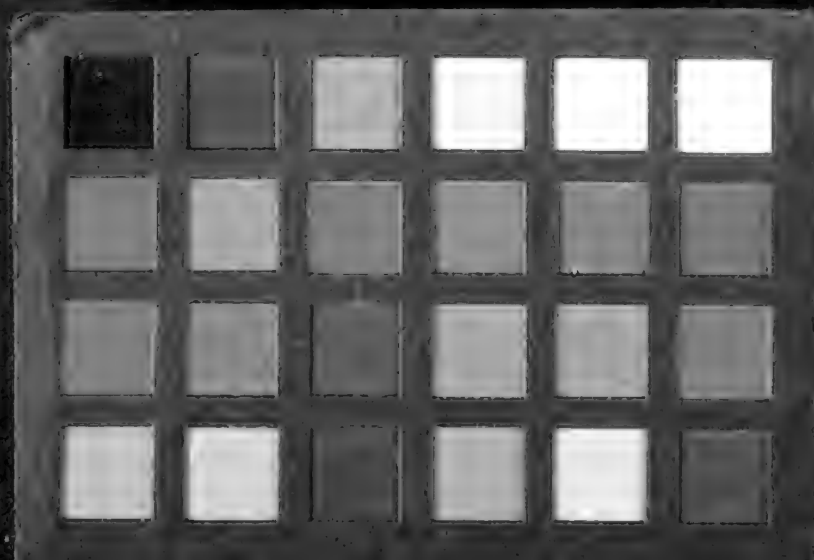
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HISTORY  
MUSEUM



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*Acanthurus hepatus*





The dorsal fin is the most typical character of the genus. The body is long, deep, and the structure of the scales is very peculiar. The scales are very small and are not so regular as in other species. The scales are very small and are not so regular as in other species.

### Channa argus

Channa argus (Forsk.)

? Channa argus (Forsk.)

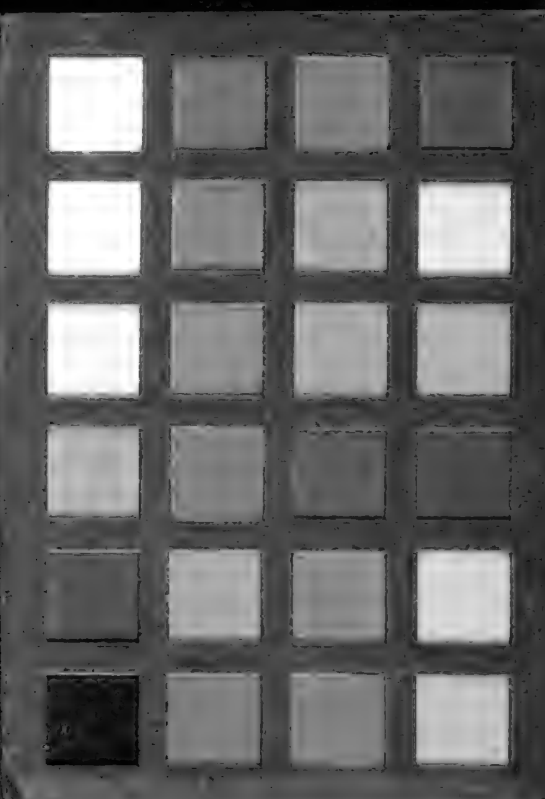
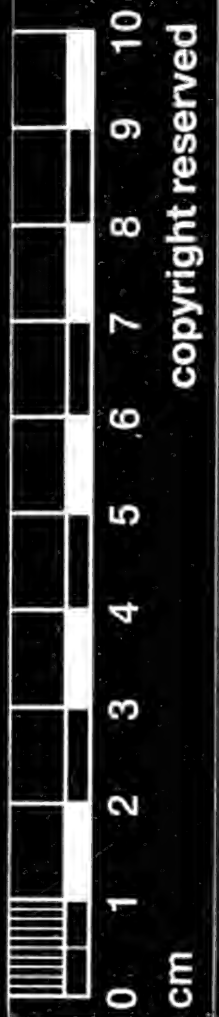
3.31; 1.0-2.0; 1.3-2.5; 1.0-1.5; 1.0-1.5; 1.0-1.5.

The general outline of the body is of an oblong shape. The depth is less than the length, the head is about half of the total length. The body is covered with small scales. The dorsal fin is the most prominent feature.

The head is small and is about 1/5 of the total length. The snout is gently curved. The dorsal fin is at an angle of about 55° to the horizontal.

The eyes are small and are about three times their diameter. The mouth is at the end of the snout.

The dorsal fin is very long and is the most characteristic feature of the genus.







102 333

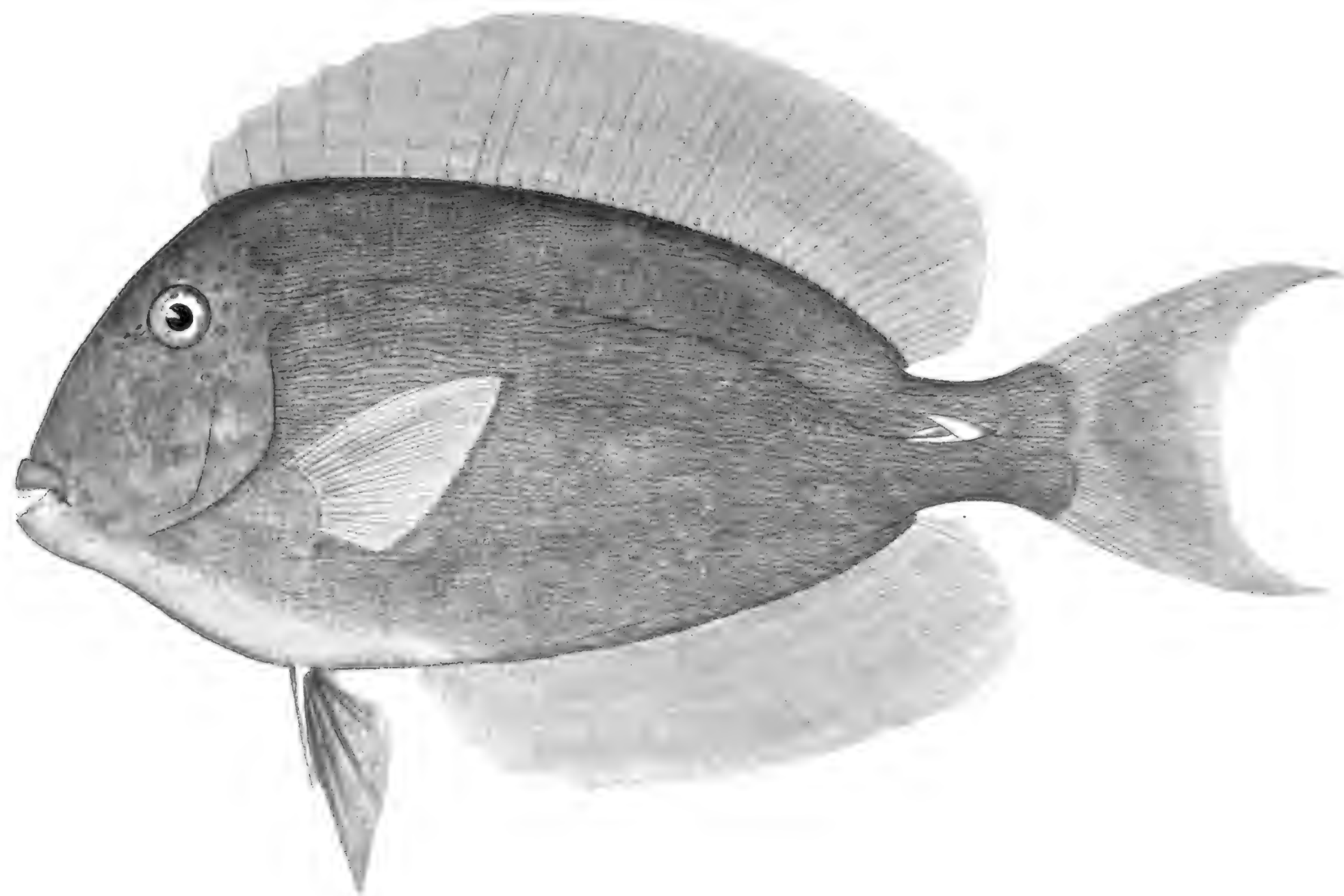
For

See also 100-101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 91

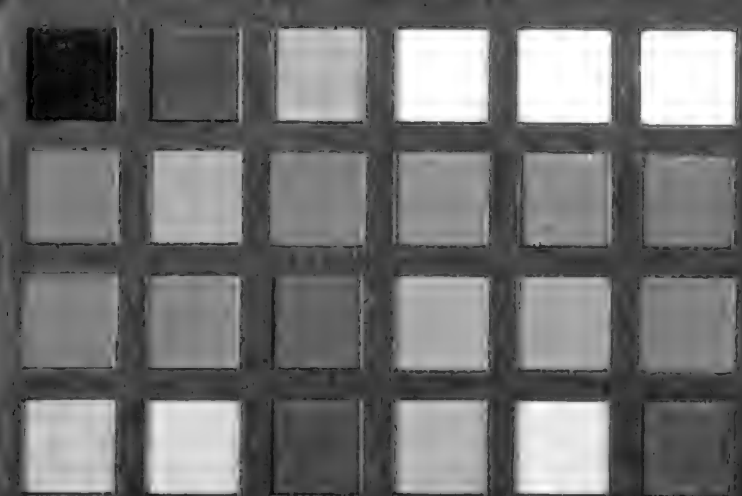
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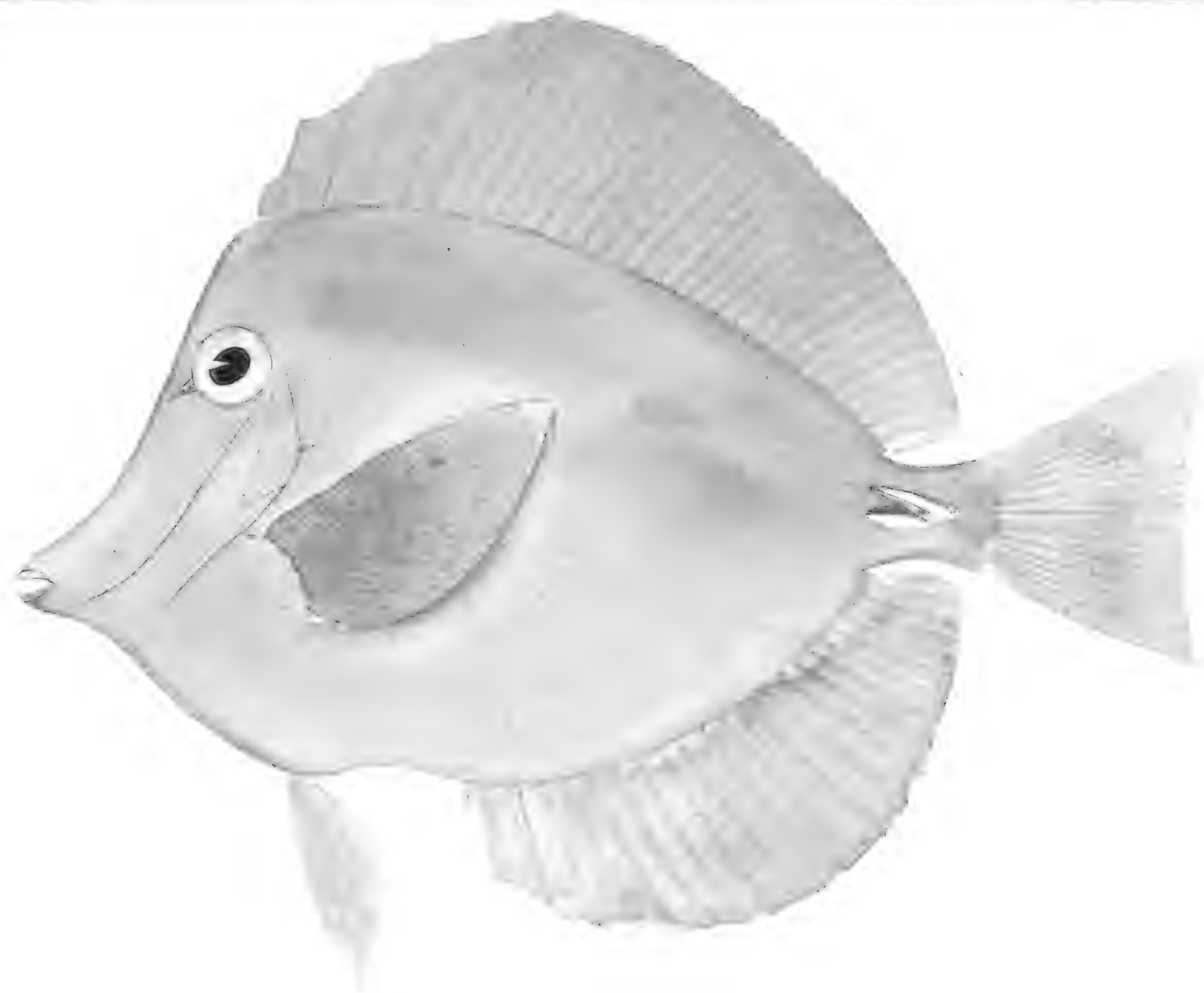






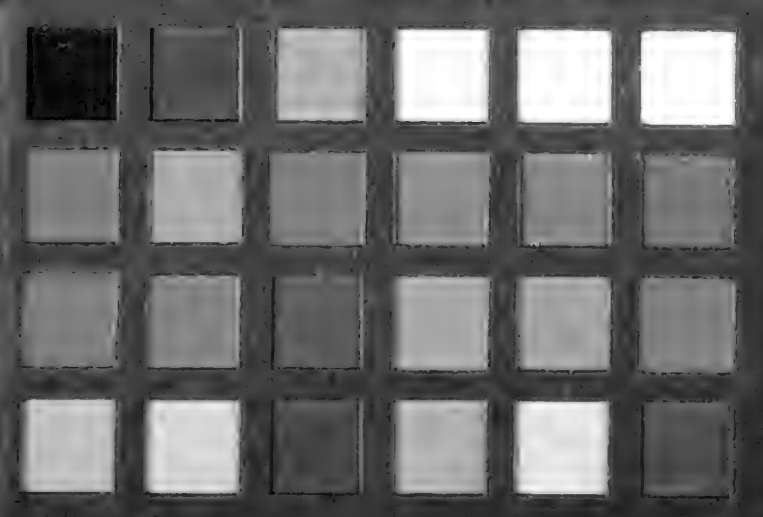
*Acanthurus lineatus*





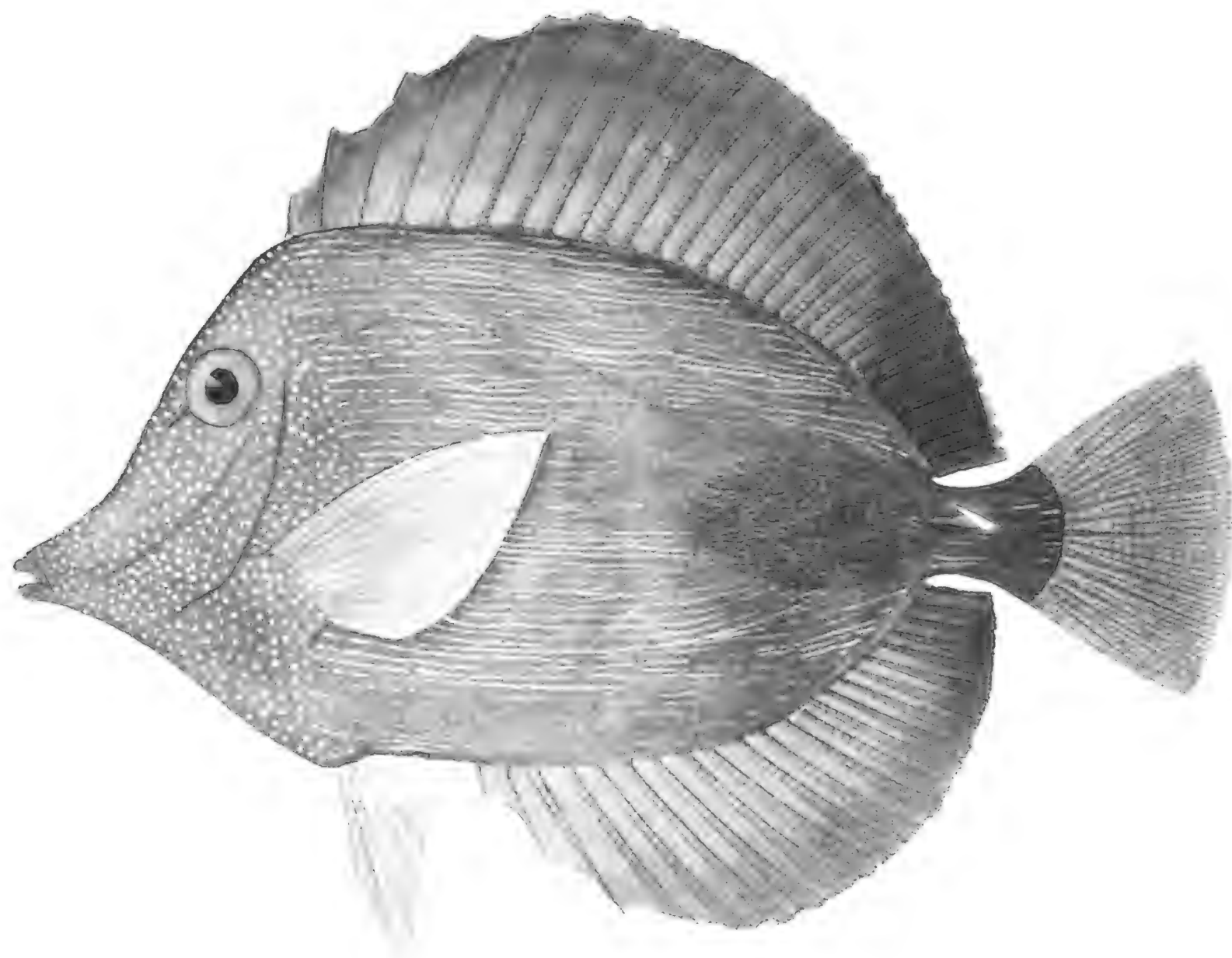
*Acanthurus glaucosus*

161

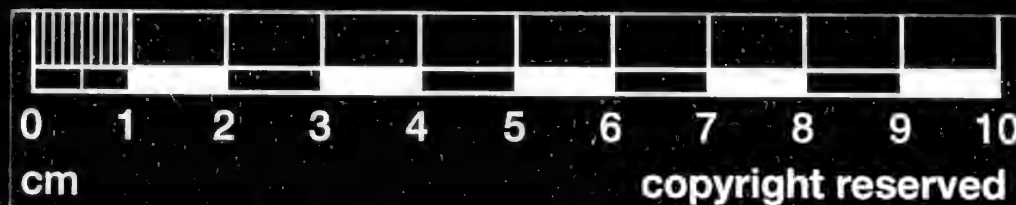
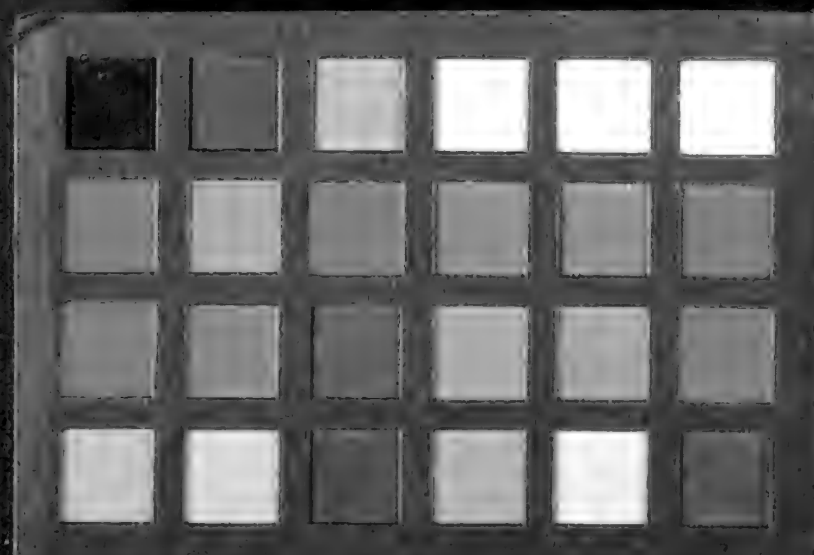








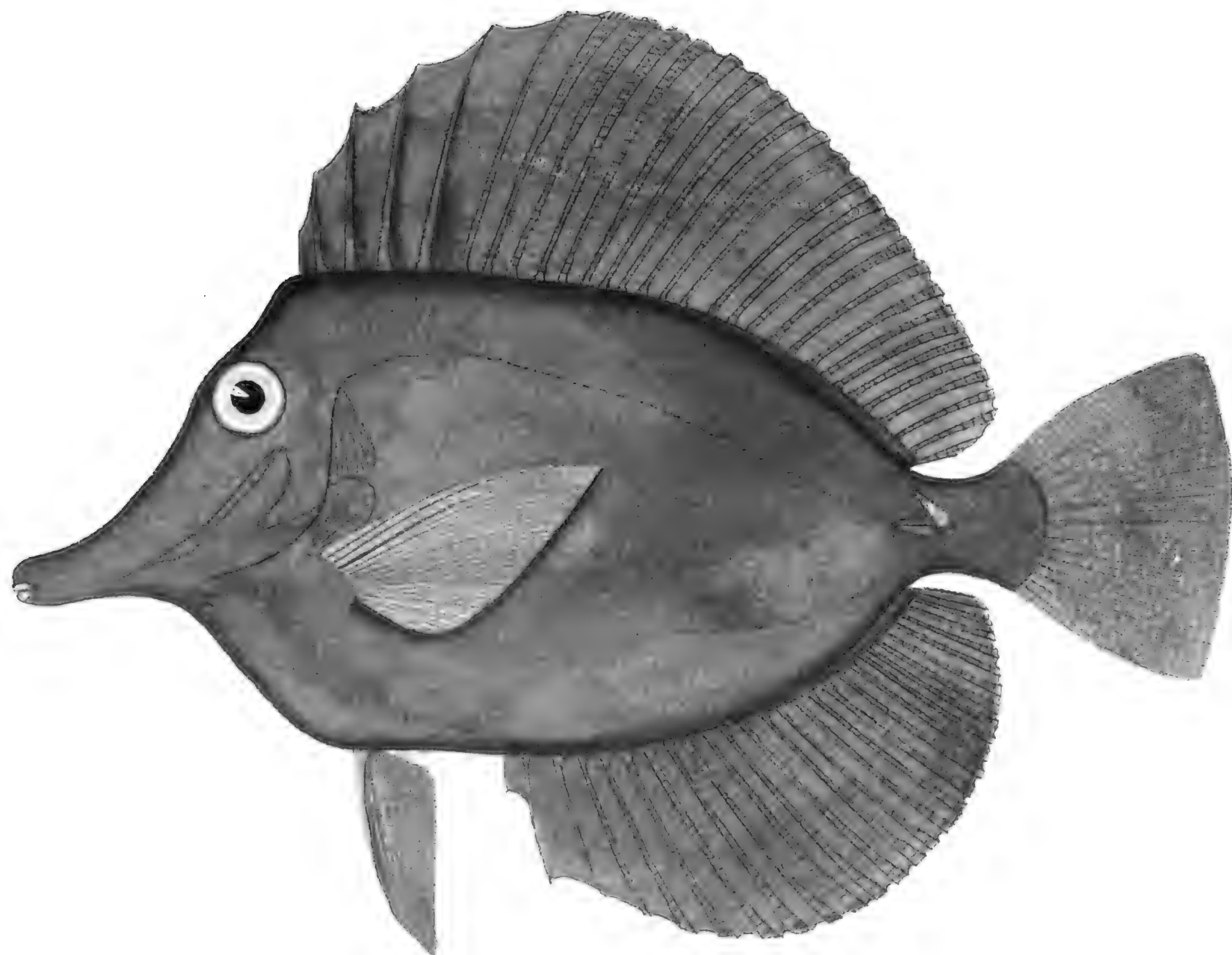
*Acanthurus lineatus*



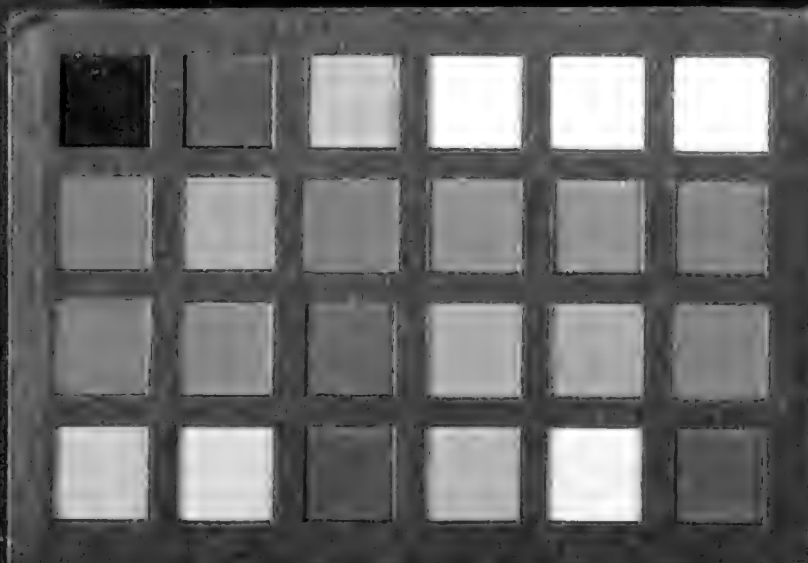


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161



*Acanthurus rostratus*



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HISTORY  
MUSEUM

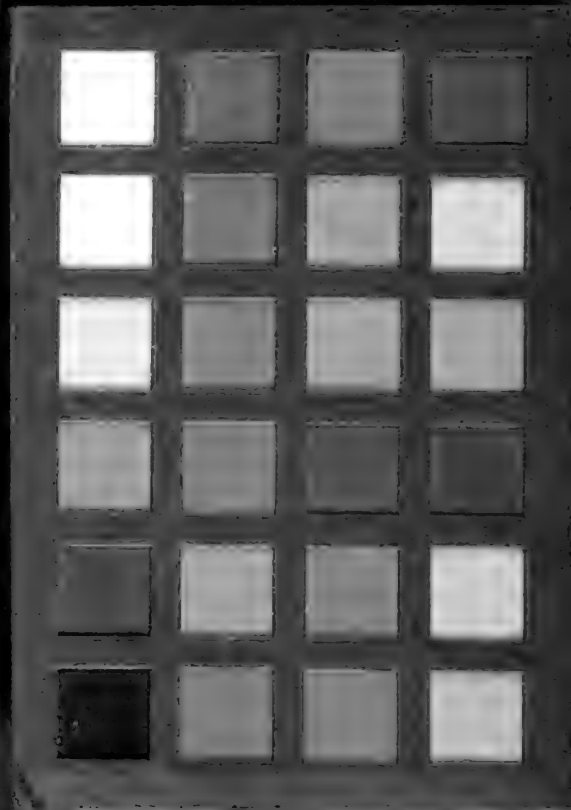
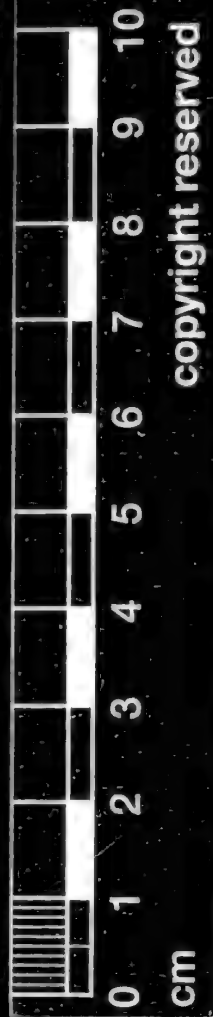
*Stenopus* *hermanni*

*Stenopus hermanni* *Stenopus* *hermanni*

An example of this species now before me, measures 10 inches in total length, of which the head comprises a little less than ~~one~~ a fourth. The general outline is oblong-ovate and the greatest depth of the body which is over the origin of the anal fin, equals about half the distance between the end of the snout and the termination of the dorsal fin. The snout is short, pyramidal in shape, its upper profile from the lips to the knob or horn is rectilinear, rising at an angle of about 45°. The eye is slightly oval in shape, inserted nearly on a horizontal line with the frontal knob, which latter is straight, slightly descending, rather slender and in length about one and a half diameter of the eye. The profile from the tip of the horn to the origin of the dorsal fin, is concave. The caudal blades are strong, developed and curved anteriorly.

For shape of fins see colored drawing.

NATURAL  
HISTORY  
MUSEUM





Color: olivaceous or olivaceous-green,  
passing into olive yellow beneath. A  
darker patch over the pectorals, fringed  
with white. Ventrals faint orange and  
the anterior steel blue. Sides yellowish  
clouded with light brown. The dorsal  
and anal fins are bluntnately striped  
with pale yellow and steel-blue, the  
stripes running obliquely posteriorly. The  
caudal is olive yellow. Ventrals olive yellow.  
Pectorals blue.

The dorsal and anal are edged with  
blue.

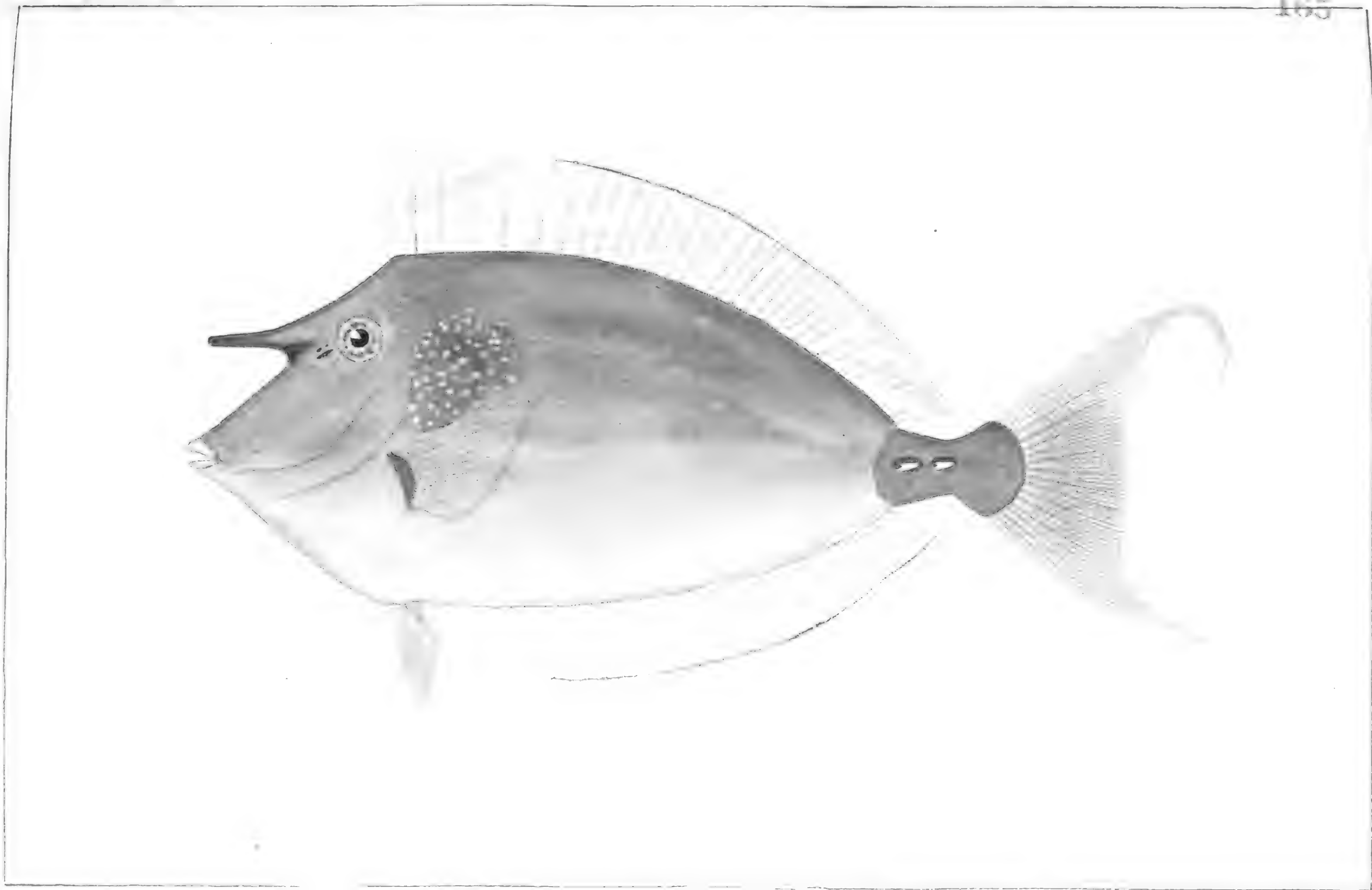
Habit - Underside pale.

Native name Kala. The caudal  
filament, ~~and~~ blades, and knob are all  
developed in adults.

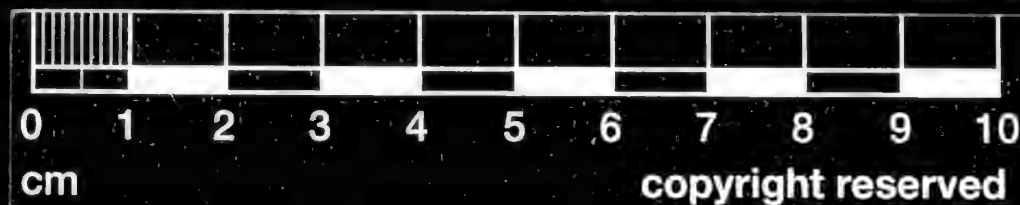
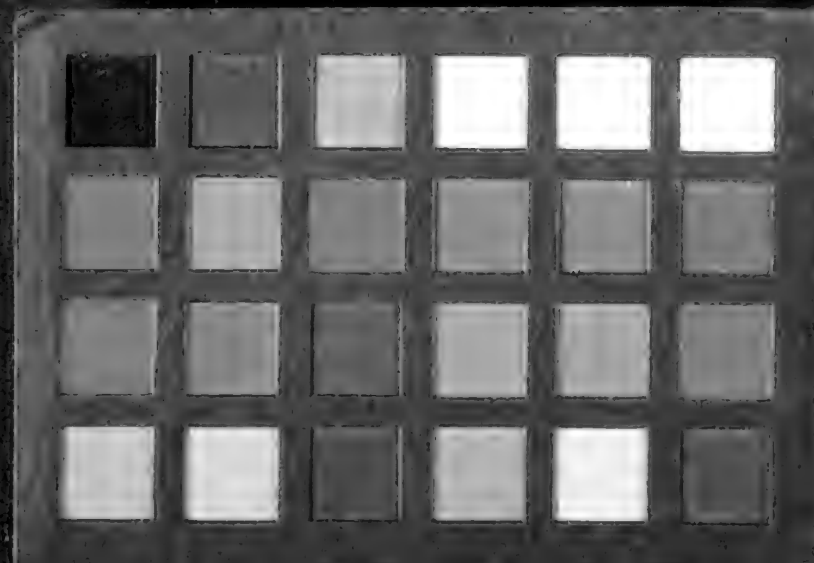


**N**  
NATURAL  
HISTORY  
MUSEUM

436  
165



*Nasus unicornis*



**N** NATURAL  
HISTORY  
MUSEUM



Larus. 16 414

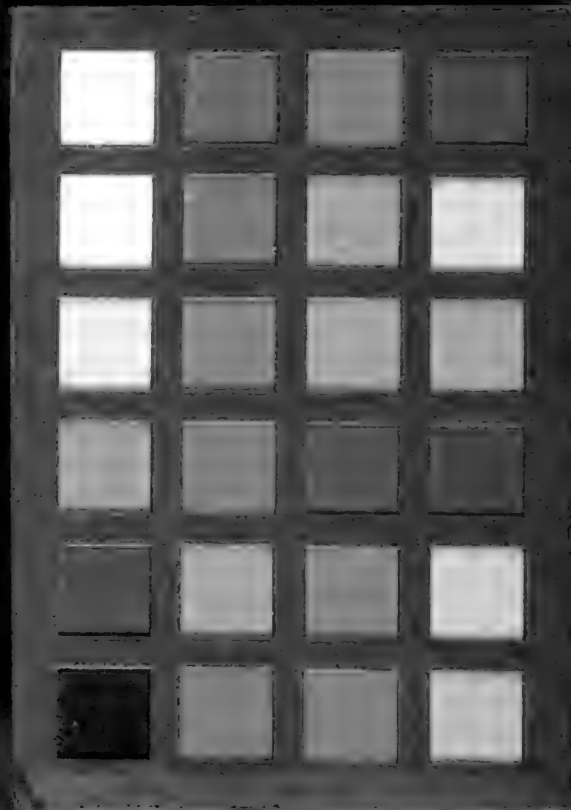
206

6.8; 11.4; 11.5; 11.5; 6.4; 1.1;  
The depth of the body at the  
origin of the anal fin equals half the  
distance between the end of the anal  
and the hinder termination of the  
base of the dorsal fin. The eye comprises  
nearly a fifth of the body, and the lower  
jaw protrudes is oblong, and about  
equal in length to the diameter of the  
eye, situated almost in front of  
the latter organs. The eyes are sub-circular  
and their diameter is nearly one third  
the length of the head. The diameter  
of the tail is small.

The dorsal fin together with  
the anal generally begins very far  
forward, the latter commencing opposite  
to the fourth dorsal spine. The  
caudal is slightly emarginate.

Color bluish slate with pale  
clouds. Irides pale brown, with dark  
brown shades. The dorsal fin is brownish  
slaty, the anal pale, and the  
caudal is red spotted with a  
violaceous tinged dorsal fin, and  
greenish slate posteriorly, ventral matter

NATURAL  
HISTORY  
MUSEUM

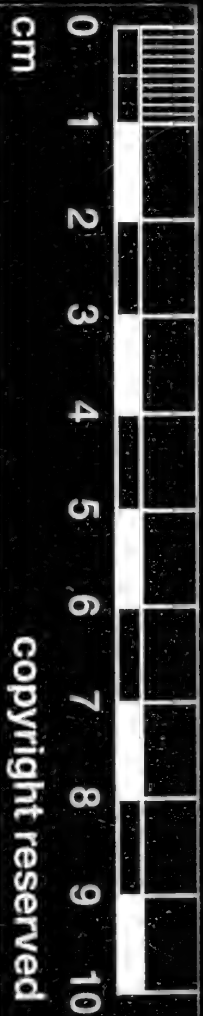


with light and dark slate. Pectoral  
colorless.

Length 10 inches.

Hab. Kingston, B.V.

The drawings and description  
are from a specimen in length.



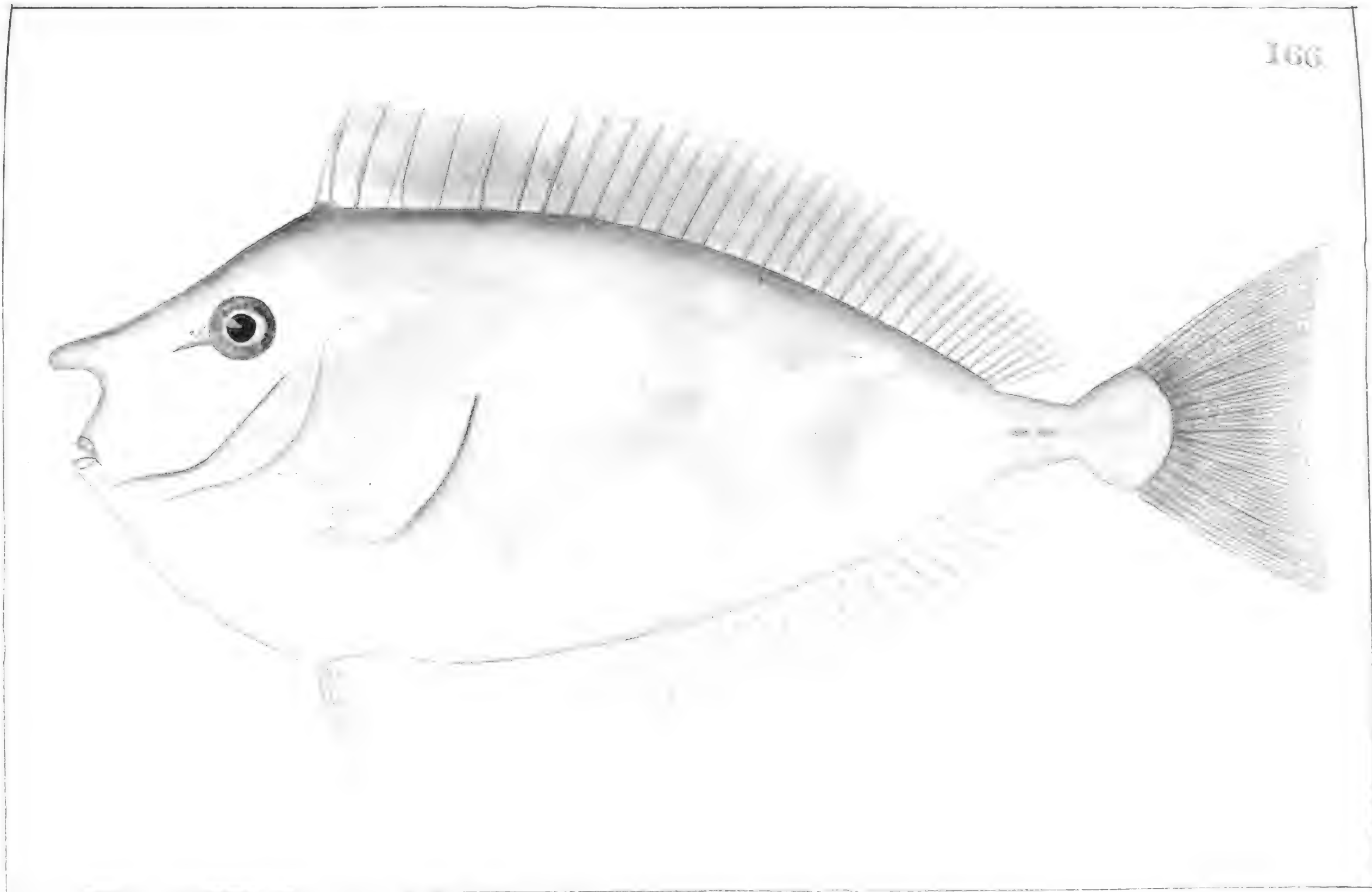
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**N**  
NATURAL  
HISTORY  
MUSEUM

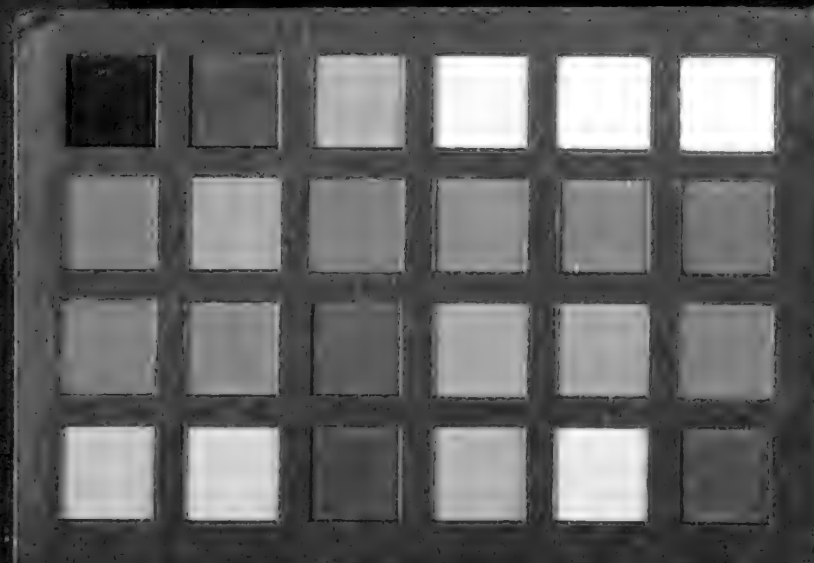


469

166



*Nasus brevirostris*



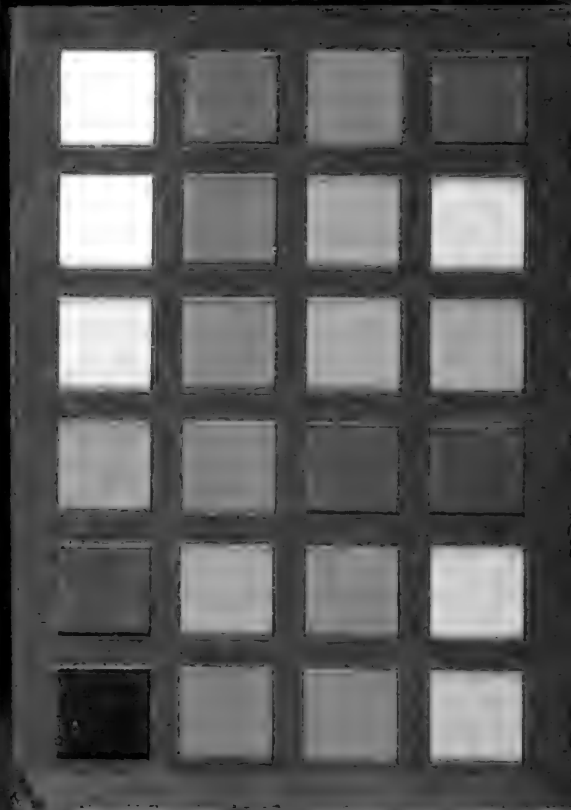
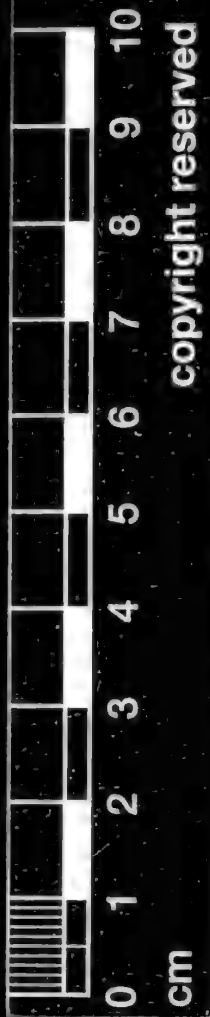
**N** NATURAL  
HISTORY  
MUSEUM

*Larus delawarensis*

D. 6-25; L. 2-27; W. 12; H. 1871.

This species, in color closely resembles No. 44, but the color of the head is quite different. The markings are more remote, and consist of small round spots on the head and the upper and lower part of the body. The middle portion of the latter is decorated by irregular shaped black spots larger than those above or below. In every other respect the two species are alike in color.

This species is not quite as deep as No. 44, and the caudal is concavely emarginate, the upper angle more prolonged than the lower one. The dorsal and anal are undeveloped, and the eye smaller. The upper profile of the head rises from the beak in a nearly vertical line, for about half the diameter of the eye in height, whence it suddenly bulges outwards, forming a rounded protuberance, whence the profile rises in a nearly straight line, at an angle of about 70° to the dorsal fin.

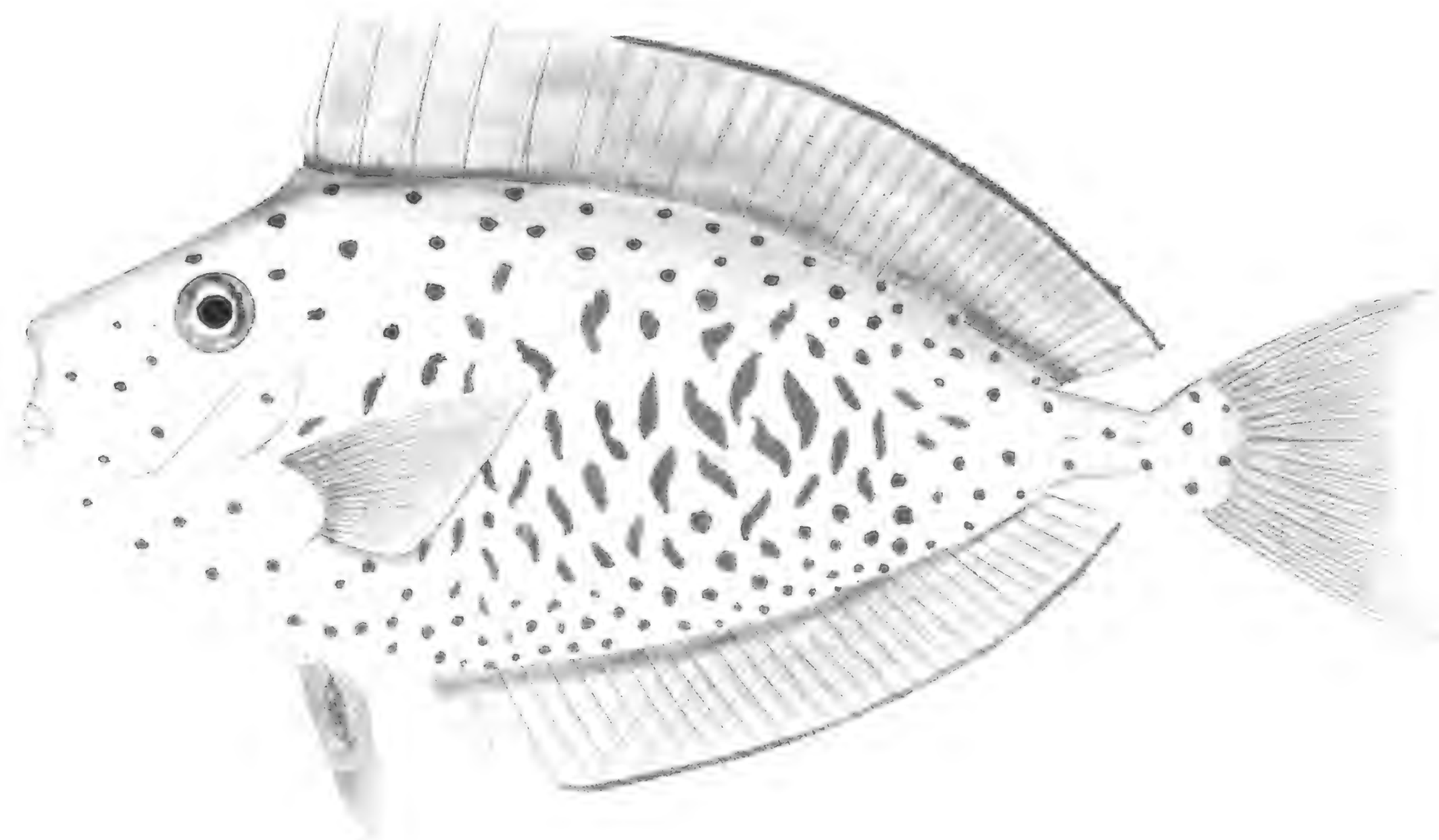
NATURAL  
HISTORY  
MUSEUM



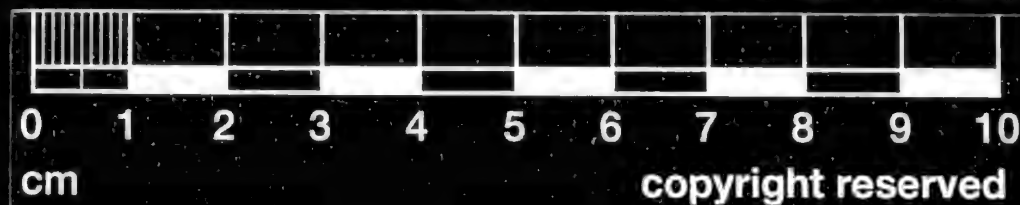
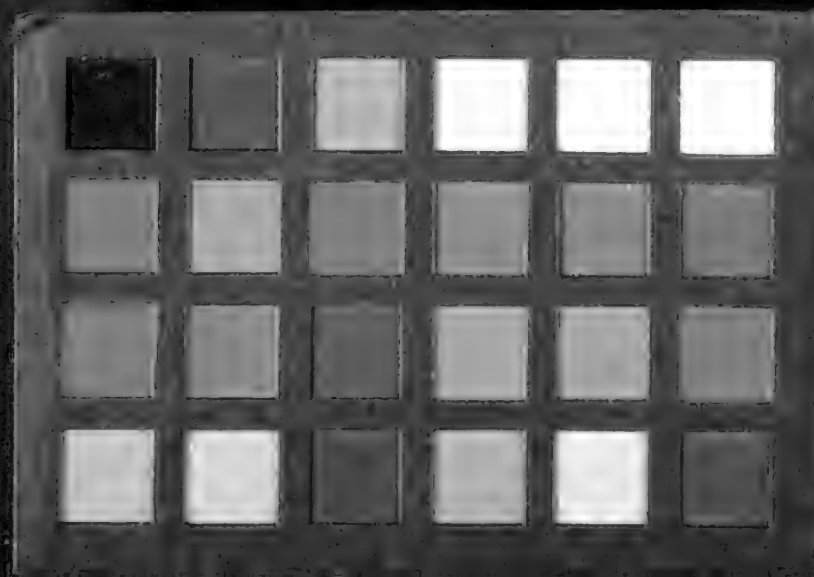
length 4 inches

Hub. H. G. Smith 1846.





*Nasus brevirostris*





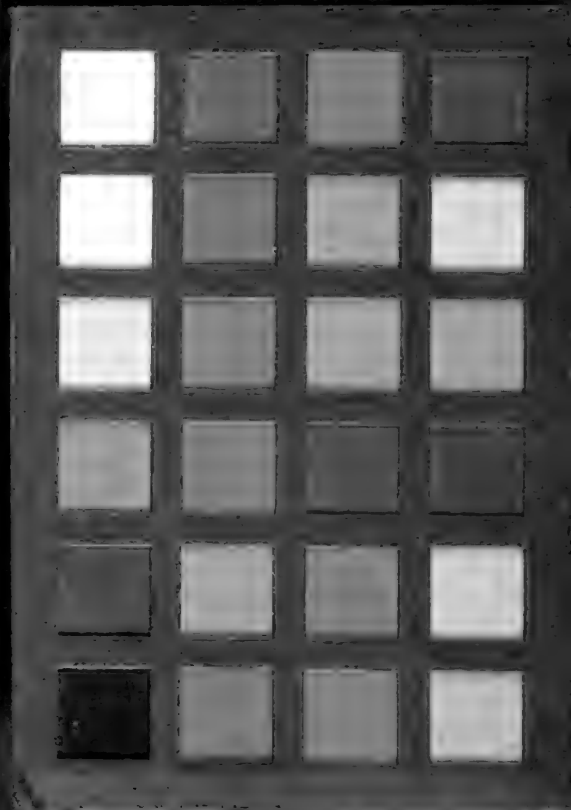
## Lacerta

The body is covered with small, closely set scales, the scales of the head being larger than those of the body. The head is broad, the snout being nearly as long as the eye. The mouth is wide, the lower jaw being longer than the upper. The nostrils are large, the distance between them being nearly equal to the diameter of the eye. The ear is small, the opening of the ear being a little more than the diameter of the pupil. The tail is long, the length being nearly equal to the length of the body, caudal excluded. The upper profile of the head is rather convex, the arch of the eye is large, and the snout is about one third the length of the head in diameter.

Both dorsal and ventral are deeply arched, the latter being more so. The fifth dorsal spine is small, is emarginate, and the process is considerably prolonged.

The gular scales are small, the scales becoming smaller beneath, and rather pro-

NATURAL  
HISTORY  
MUSEUM



of a pale blue color, the spots remote  
on the head and breast. Sides light  
brown, some with dark brown. The dorsal  
and anal fins are yellowish brown,  
edges with blue, and the caudal is  
the same hue as the body, except a tinge  
palest on base. Pectorals light brown. The  
ventral and pelvic with yellowish brown.



NATURAL  
HISTORY  
MUSEUM



Plate 81 (*Nareus vlamingii*)

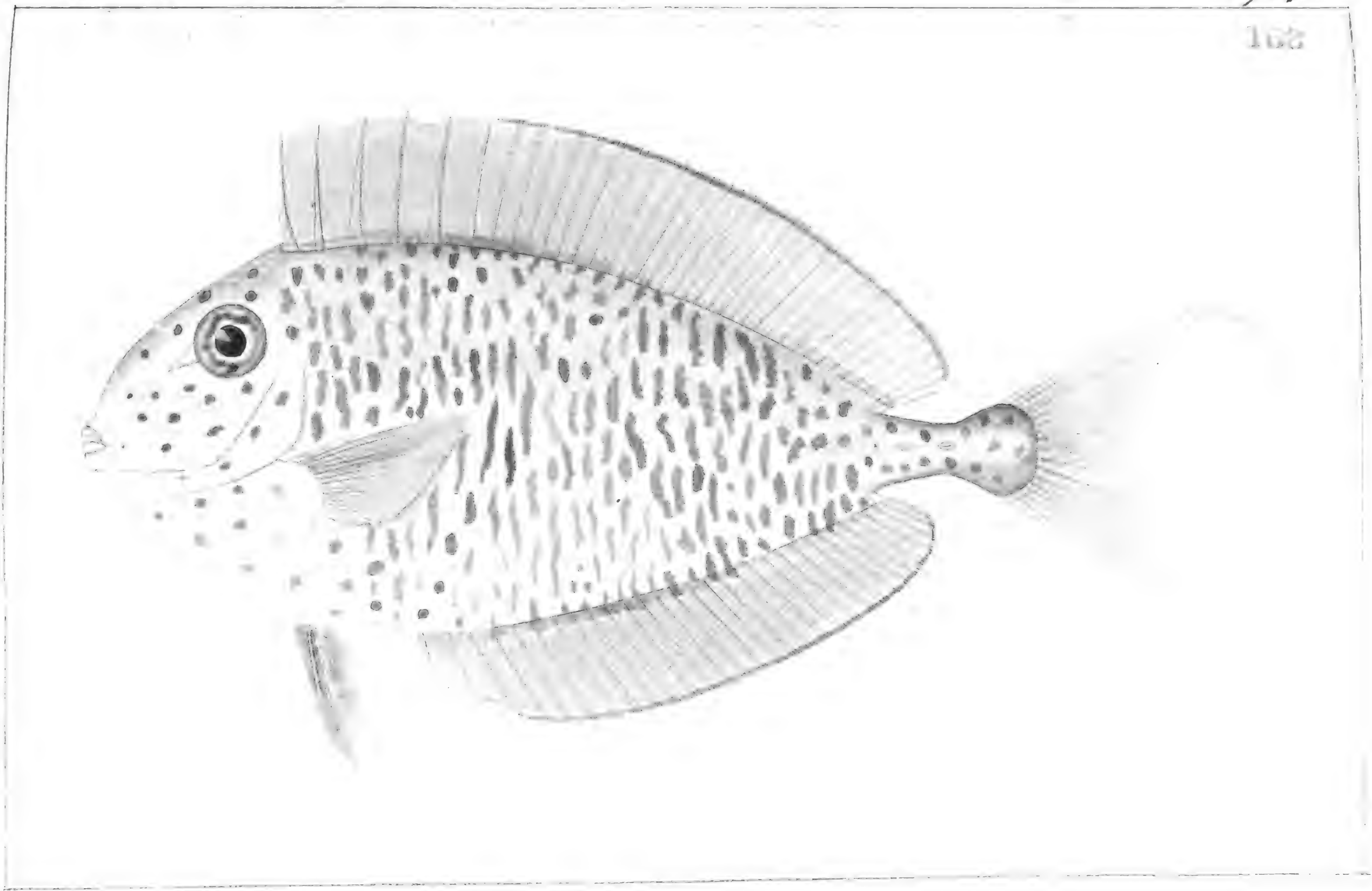
Ground colour darker than in Garrett's 474,  
in fact a brownish-violet; fins nearly black;  
the blue of the spots of a purer tint; the  
stripes on the fins to be drawn from the  
specimen.



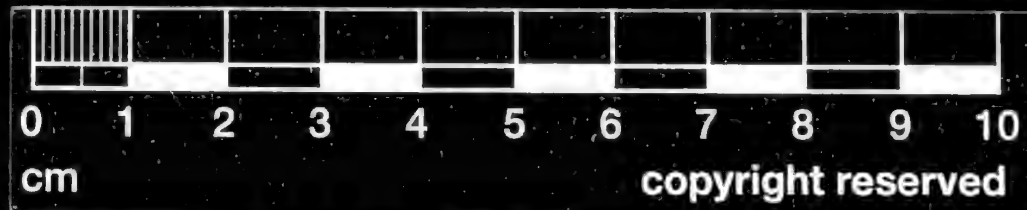
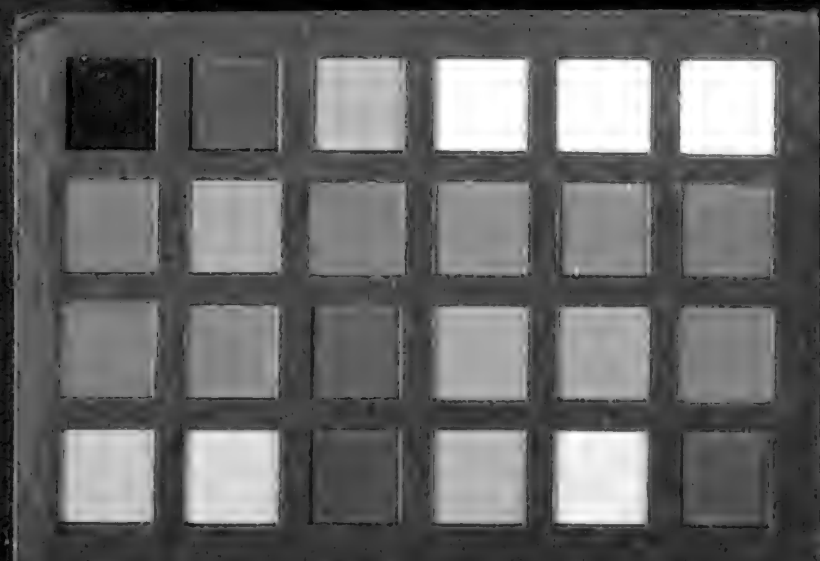
*Muraena*

474

162



*Naseus vlamingii*





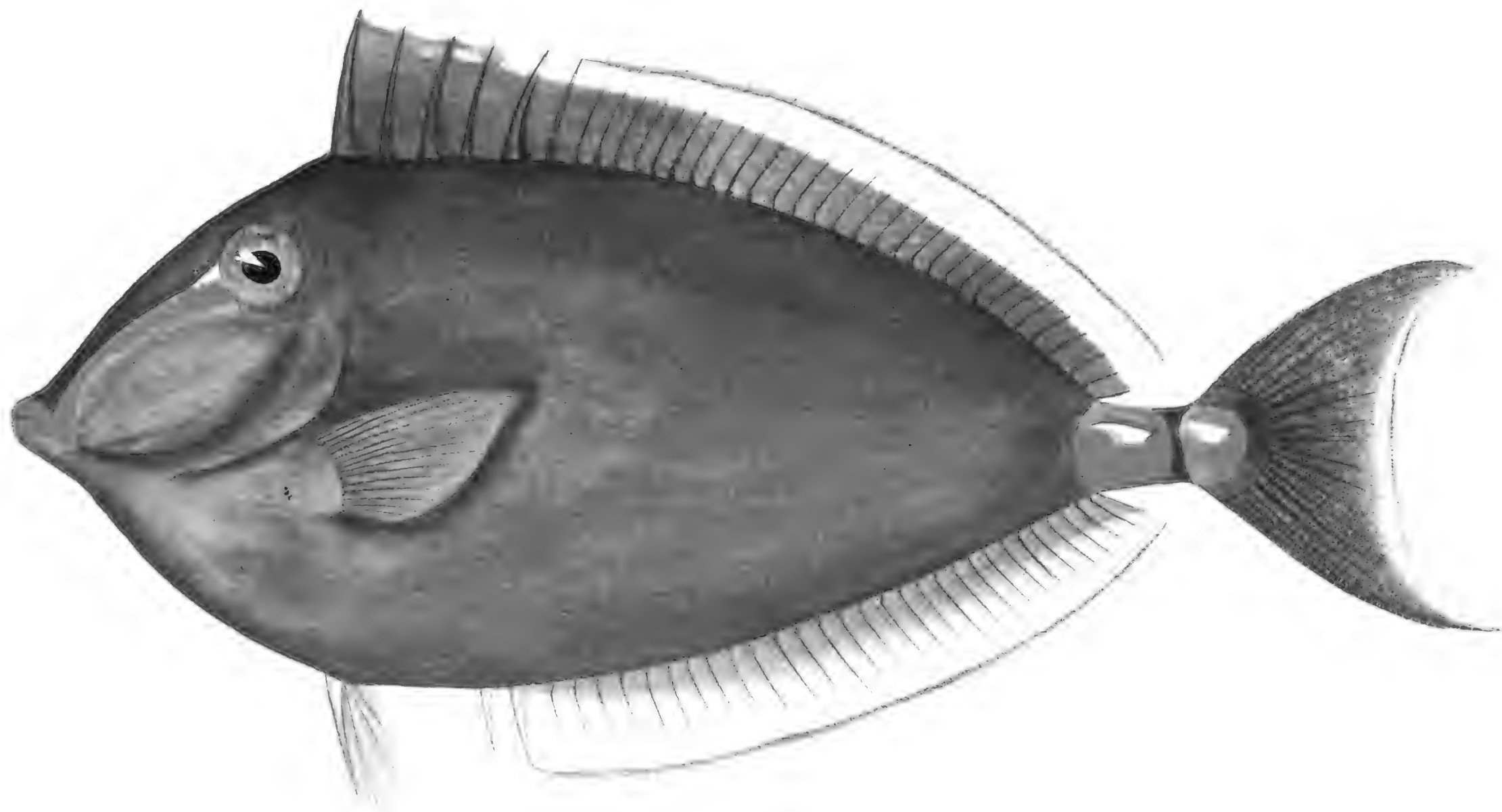


The first two lateral rays are bifid  
 and the third undivided. The pectorals  
 are as long as the anal base.  
 The dorsal is as long as the body.  
 The body blackish brown. The lips  
 are thick extending from the eye down  
 to the angle of the mouth, and two large  
 spots on the body, light orange, the  
 two on the sides, the spine, and  
 the base with brown and yellow. All the  
 fins except the anal portions of the ver-  
 tebral rays blackish brown, the upper  
 part of the soft dorsal and lower part  
 of the anal column both with a narrow  
 in the marginal light blue line, some-  
 times in additional black one, and the  
 middle of the soft dorsal shading off  
 to the bluish white. The concave border  
 of the caudal is margined with white  
 and a marginal green stripe. The two  
 upper rays are narrow and yellowish  
 white.  
 Length 10 inches.

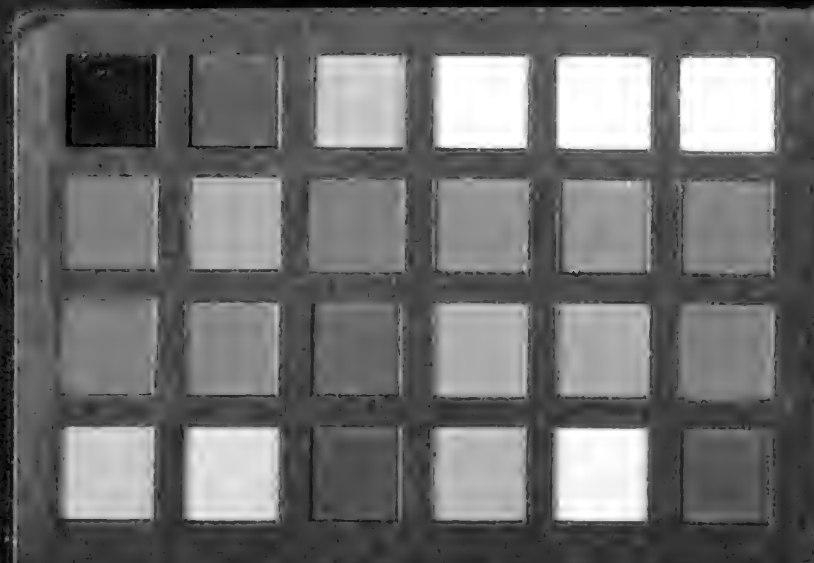
Hab. All the Polynesian Is-  
 lands native name at the Society Is-  
 lands is "Omame" at Tahiti "Omé"







*Nasus lituratus*



cm

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HISTORY  
MUSEUM

*Lasius* n. 776

L. b-50; 4. - 1/2; 1. 1/2; 1. 1/2; 1. 1/2.  
 The following are the specimens of  
 the *Volutes* and *Stomatopoda* which  
 I have collected. The *Volutes* are  
 94 inches in length and the *Stomatopoda*  
 are 10 inches in length. The *Volutes*  
 are never seen in the water. The  
 specimens of the *Volutes* are all  
 extremely small. The *Stomatopoda* are  
 subquadrately, but, with the *Volutes* collecting  
 by the foundation of the ship in which  
 they were shipped. The *Volutes* are  
 made in colors brown and black  
 when left in the water. The *Stomatopoda*

The lower portion of a black color, forming the lower part of the lower third of the head and body, the latter portion with numerous black vertical small spots, particularly on the sides. The dorsal, anal and caudal blackish, the other fins yellowish.

The general aspect of the fish is more slender than what the young





The head is low, the body is a little with, the  
 of the head is a little within the diameter  
 of the head. The upper margin is nearly  
 straight, the rest of the back, the spine is  
 the diameter of the head in length, but is one third  
 of the head. The spine is a column, and the  
 first is a column, behind, all the rays in a  
 column, and the last two rays of the last have  
 the same, and the last two rays of the first are

at first it was with near the center  
diff. but the ~~the~~ the ~~the~~ in form is  
about the same.

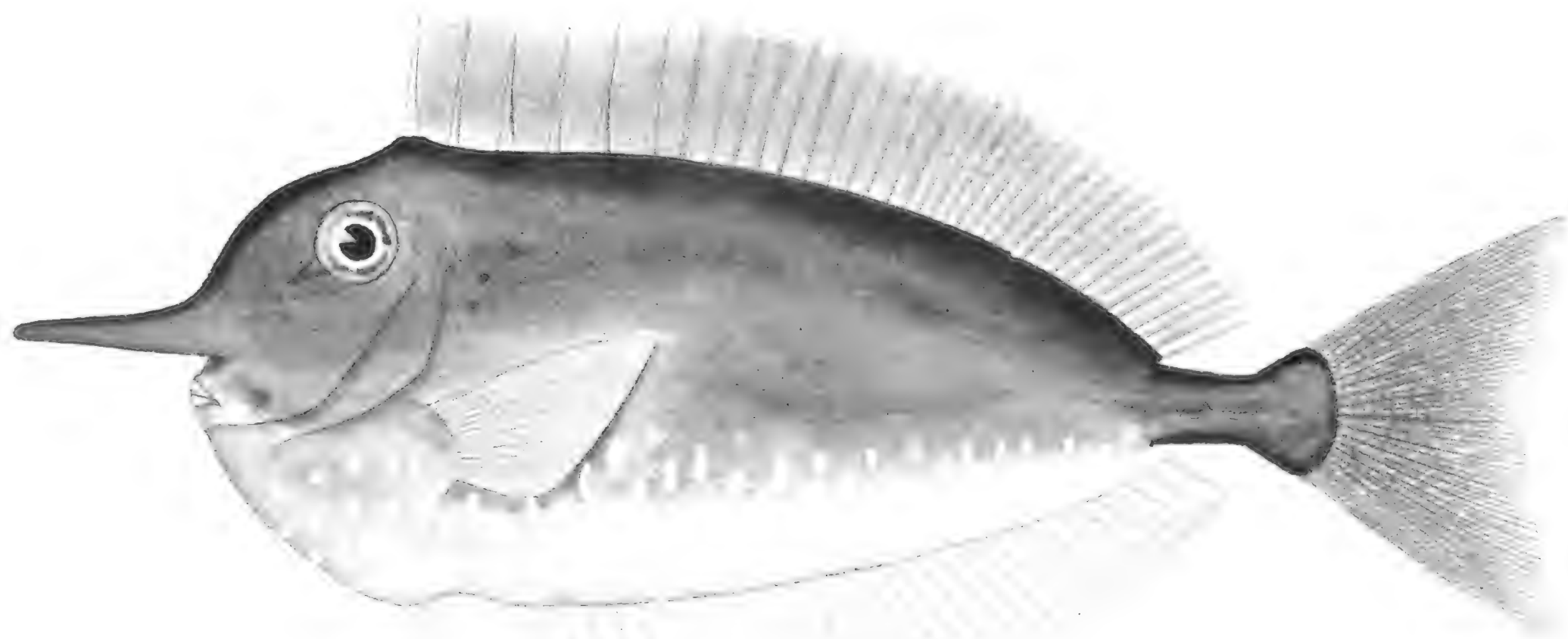
April 17 - Leitch, L.



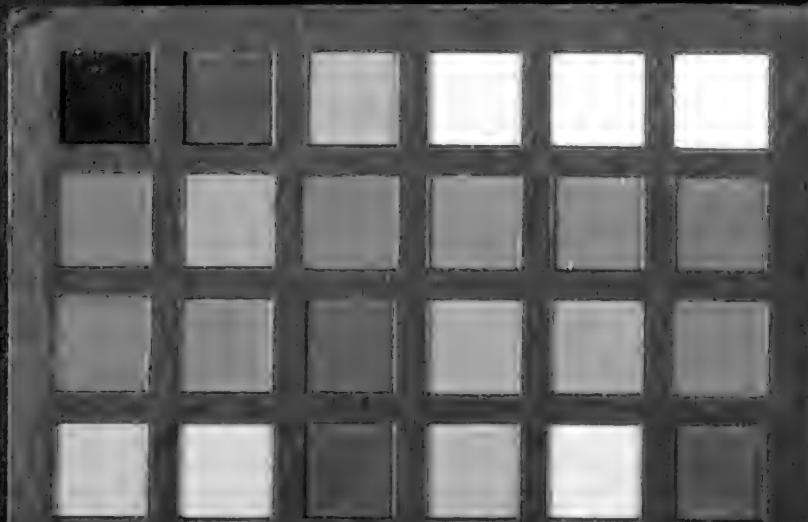


476

170



*Acanthurus sp.*



**N** NATURAL  
HISTORY  
MUSEUM

*Caridina*

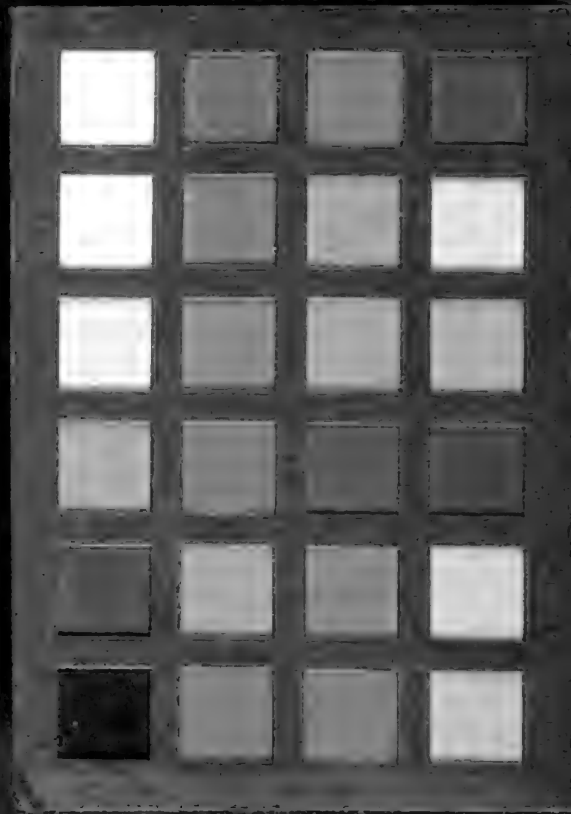
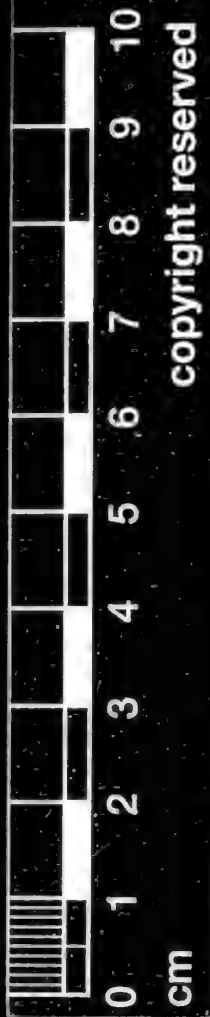
*Caridina* (type species, *Caridina*).

The unusual aspect of this species is ovate, strongly compressed, and the greatest depth is not quite half the total length, which is equal to the head, nine to ten times the profile of the head is shown, the gill opening in front of the eye, and the distance from the snout to the dorsal fin is about 4/5. The eyes are large, circular in shape and situated about midway between the front and the dorsal fin and the angle of the mouth.

The dorsal fin commences at a point just behind the eye, and the first spine considerably over tops the second, whence they are over the greater lower and each other. The first portion is more than twice the of the spines, and the rays are all unbranched, though some of the posterior ones exhibit indication of dichotomy. The anal fin commences beneath the fifth dorsal spine, and like the latter fin the anterior spine is the longest, and the depth is the same as the fin above. The ventral is small, inserted beneath the pectorals, the anterior ~~gape~~ spine is short and followed by three unbranched rays. The first dorsal are longer than the ventral, and the anal fin is as long as the head is deep, being emarginate.

Color steel-blue, iridescent.

NATURAL  
HISTORY  
MUSEUM





dark along the back and head.  
The upper half of the flukes is  
marked with three or four horizontal  
rows of dark spots, the upper the larger,  
and gradually become smaller and  
fewer beneath. Sometimes one or  
two small dark colored spots mark  
the top of the caudal trunk. Ventrals  
silvery. Spectral and caudal yellow-  
brown. Ventral with a dusky tinge.  
Dorsal blackish with a basal series  
of pale spots. Anal slightly dusky.  
Sometimes traversed by a light  
bluish white band.

Length 2 inches.

St. L. - Society, Is. L.

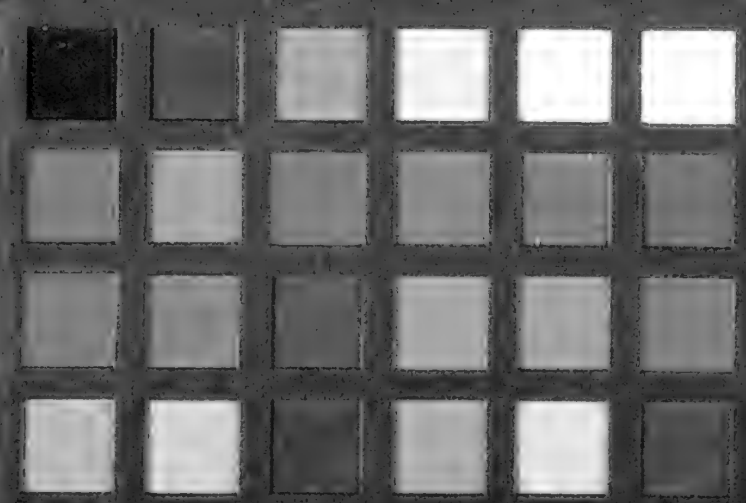
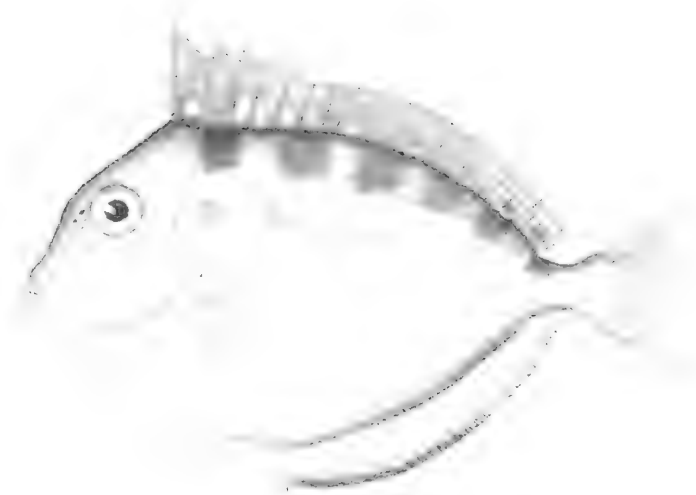


**N**  
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HISTORY  
MUSEUM

*Nareus sp.*

334

171



**N** NATURAL  
HISTORY  
MUSEUM





in the center of the eye. The two over-  
black lines, nasal openings are contiguous  
and situated rather nearer to the eye  
than the end of the snout. The large rounded  
preopercle margin is striated.

The first dorsal is a little longer  
than deep, the first anal ray (the first an-  
nal ray is smaller) is more than half as tall.  
The second dorsal better is slightly over-  
topped the third the highest, where they  
rapidly decrease posteriorly, the two last  
very small and of nearly equal size. The  
soft dorsal extends over to the first anal  
ray, midway between the end of the  
snout and the last finlet, which latter  
are eleven in number. The biangular ante-  
opercle portion is in height equal to the  
first dorsal base.

The anal fin, which is shaped  
like the first dorsal, is broken up into  
seven finlets, and takes its origin nearly  
half the length of the head posterior  
to the commencement of the soft dorsal.  
The ventrals when closely appressed  
to the belly, reaches half way to the  
small spring anal fin.

The pectorals of two or a little  
posterior to the origin of the soft anal  
fin, and the pelvic which is pre-  
femoral, forked is nearly as long as  
the head, and the lobes are elongate  
triangular and pointed.

The upper two-thirds of the  
fins is light siliceous green with  
a metallic gloss. The lower parts like  
pale yellowish white in the vent reflecting

0 1 2 3 4 5 6 7 8 9 10  
cm  
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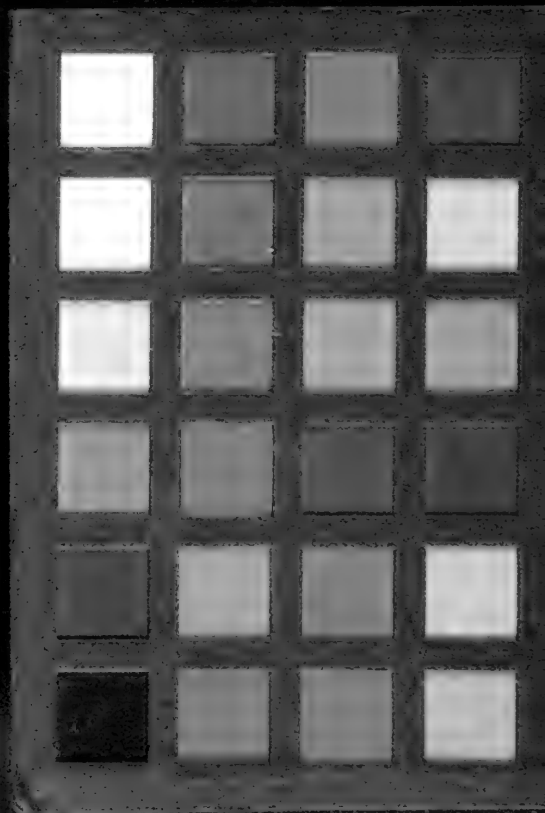
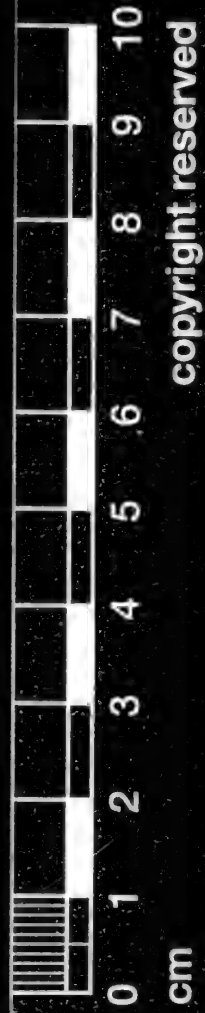
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HISTORY  
MUSEUM



in certain light the I find spot marks  
the opercle. Girdles silvery with a light  
tinge of brown. Ventrals with a slight  
dusky tinge, the caudal silvery, edged  
shaded with blackish on the posterior  
margin. The anal and ventral nearly color-  
less, and the pectoral silvery from  
above.

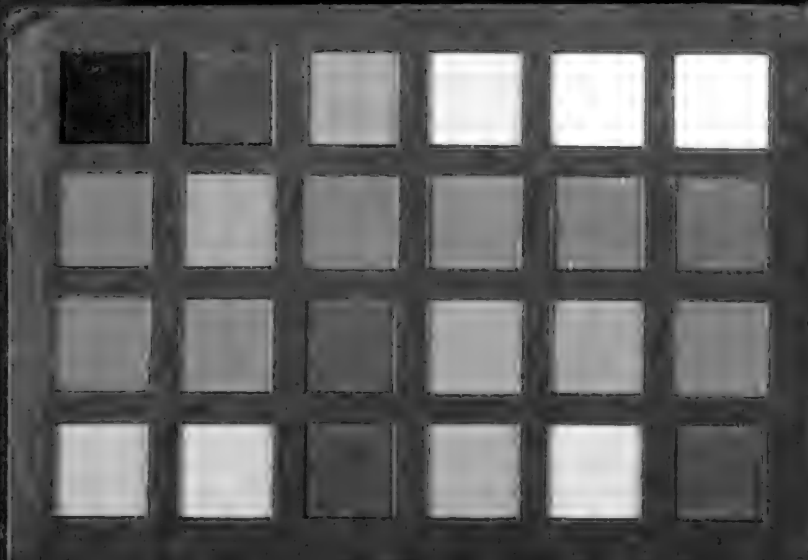
Length 12 inches

Heb. 1891. 11.



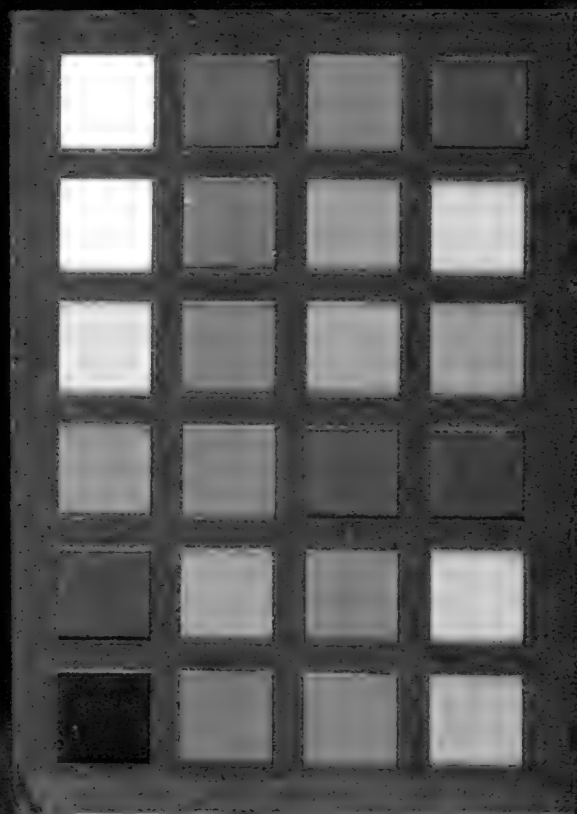


*Caranx rotleri*

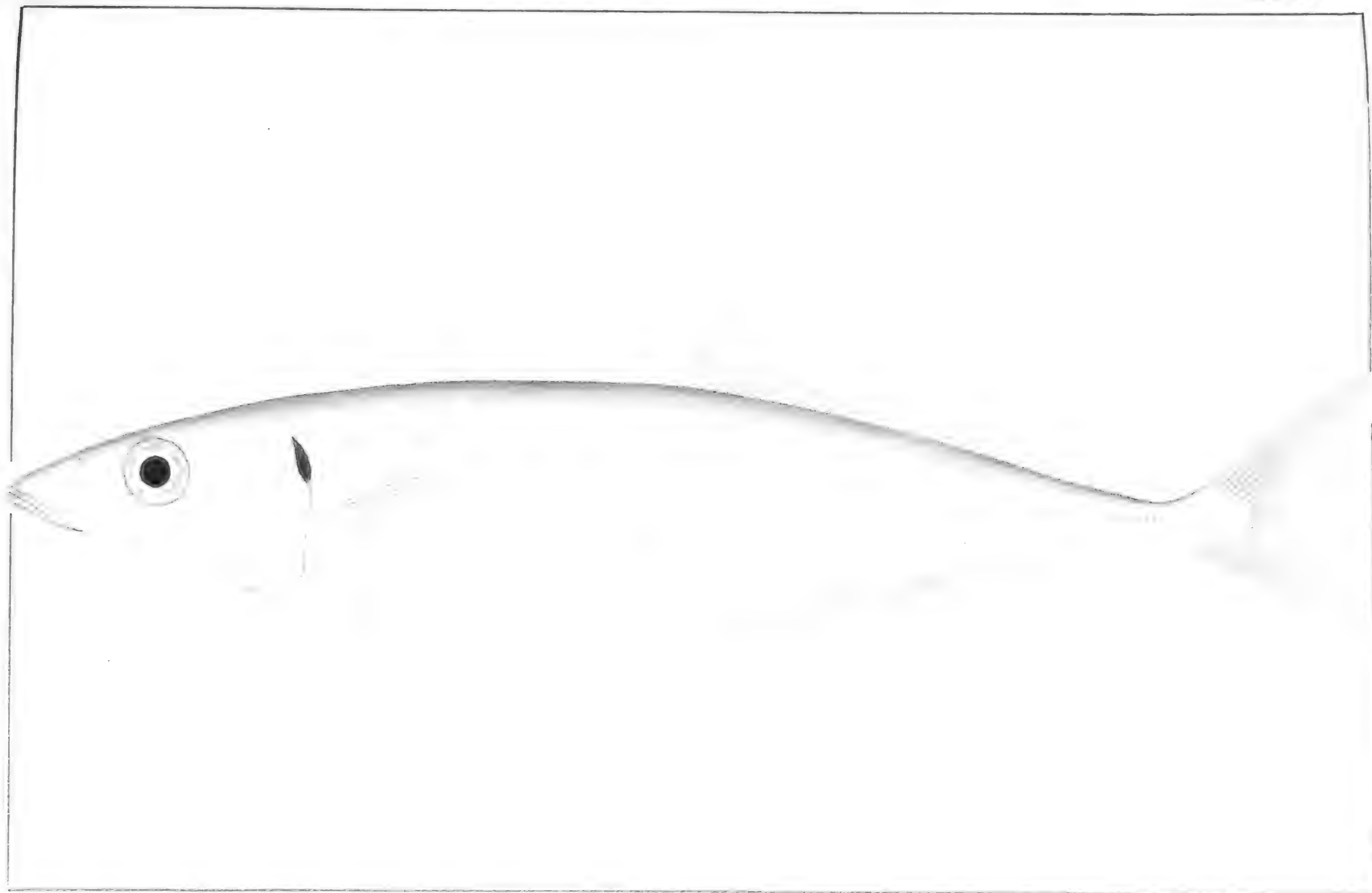




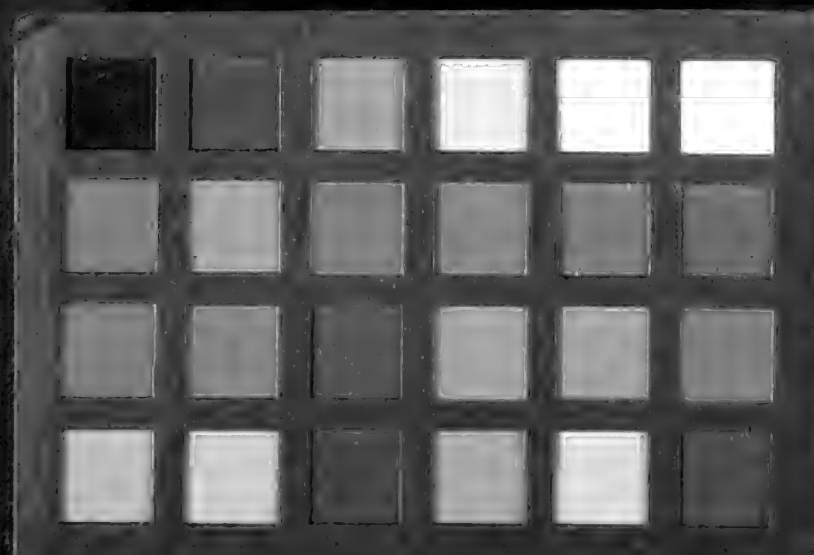






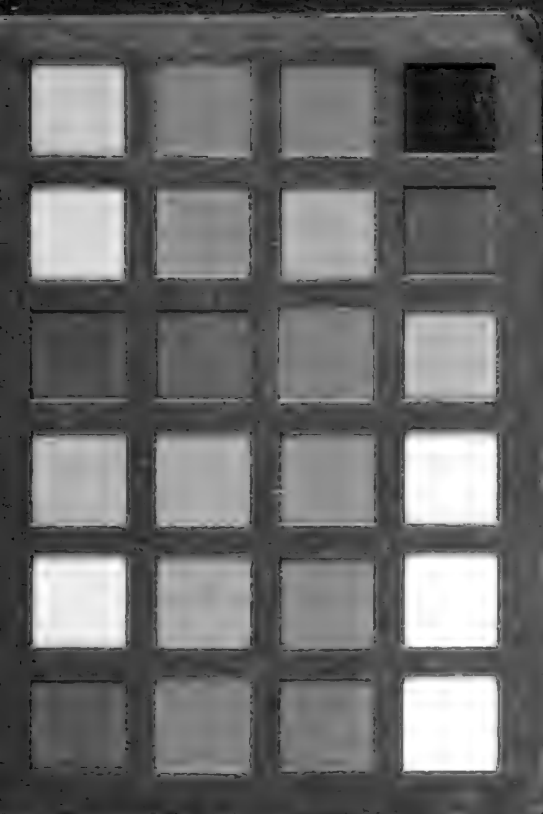


*Caranx sanctae-helenae*





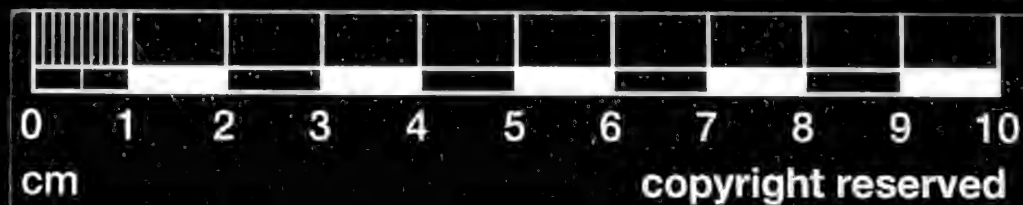
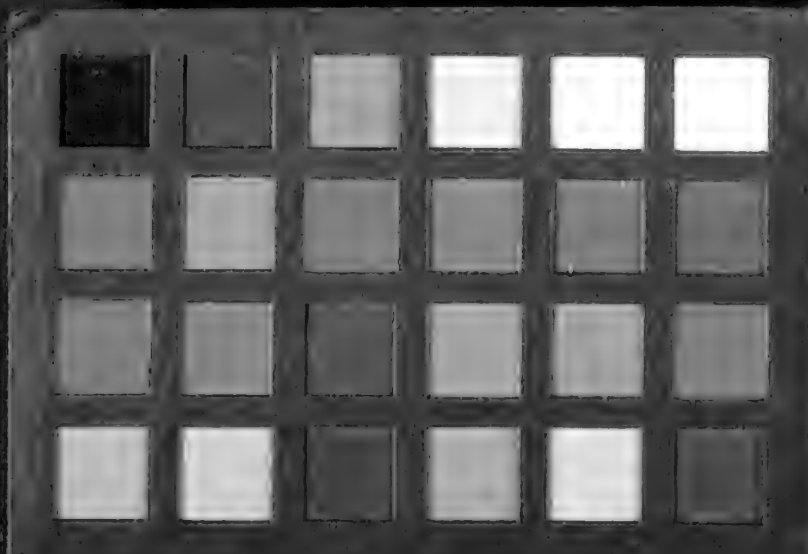




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HISTORY  
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*Caranx crumenophthalmus*



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HISTORY  
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*Carangus atratus, n. n.*

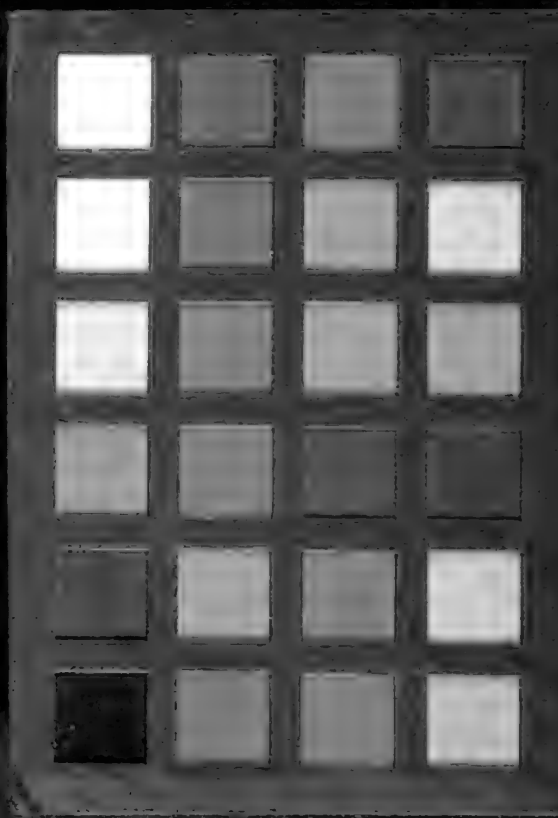
175

B. 5; D. 7-8; A. 14-15; P. 12-13; V. 14-15; L. 14-15.

The greatest depth of the body, which is at the origin of the second dorsal, is but one third of the total length. The head, which comprises nearly a fourth of the fish presents a rather deep concave depression in front of the eye. The hinder tip of the maxillary bone is not at one place, but at the center of the lower jaw, and is, slightly, more or less, disposed in a single range; larger in the lower jaw and more numerous than in the upper. The lower jaw, oval, its greatest diameter in length, four times in the length of the head, and lies between its anterior limit and the lower jaw. The cheek, upper half of the interopercle, the opercle region and occipital, taken together, are nearly plate-like, may be considered in the lateral line.

The first dorsal is half as long as the second, its third ray, being nearly the length of its own base, and is longer than of the soft dorsal a few inches. The first point which is nearly as long as its base, which latter is nearly the length of the pectoral. The anal is short and is nearly as long as the

NATURAL HISTORY MUSEUM



It is high and short, is nearly two thirds the length of its base. The parts of the caudal are wide, and nearly as long as the head.

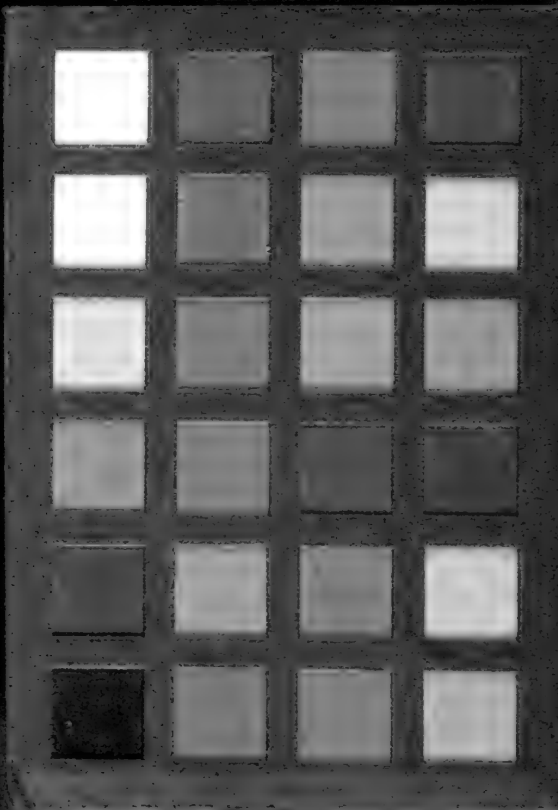
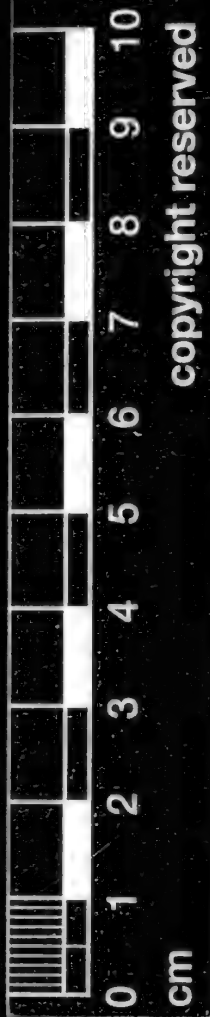
Color deep dusky, even gray, with an olivaceous-black tinge along the upper part, sometimes nearly black. Sides more or less yellow. First dorsal slender, with dark and steel-blue margins. The other dorsal fins blackish, the soft dorsal and anal fins along their bases. Ventrals black, becoming more posteriorly. Ventral steel-blue, and is less mottled with dusky.

Length, 2 inches.

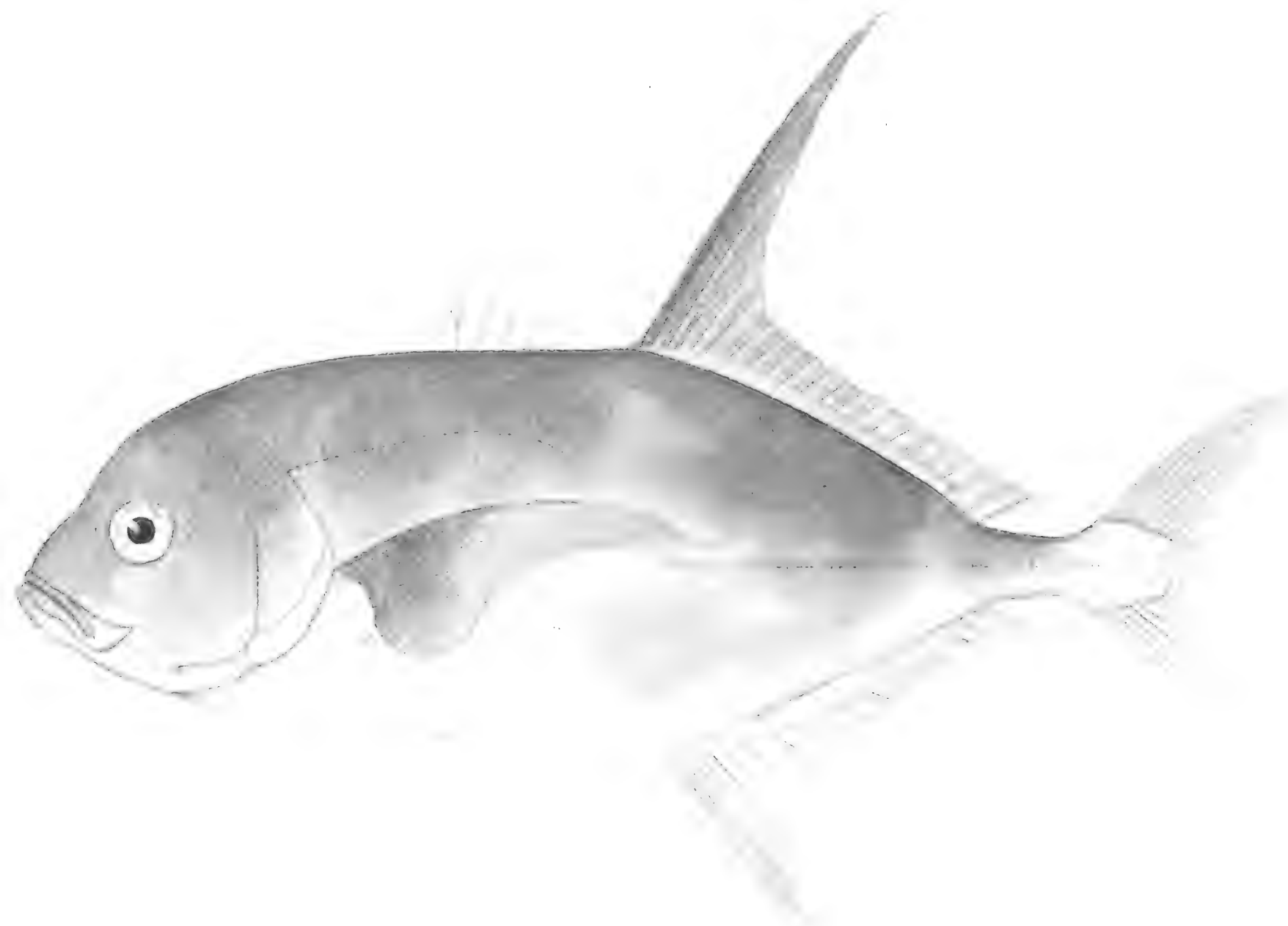
Habitat - chiefly brackish.

Remarks - it is a new species, called by the natives "Pahare rubi". It may be readily determined by its blackish color, high dorsal and anal fins, and its position.

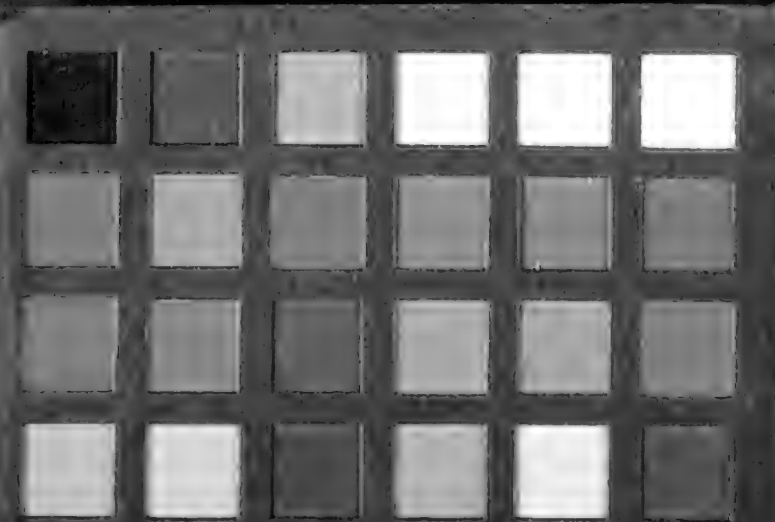
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HISTORY  
MUSEUM







*Surmugus*



cm

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20



...the ... more than helps  
... the anal fin is a little  
... than the opposite fin. The  
... the ... are nearly half  
... the ... are  
... the anal fin is more than  
... the length of the fish. The caudal  
... are longer than the head and taper  
to a point.

Color brilliant silver with an  
iridescent ... when full grown be-  
comes ... mottled with small  
... belly white and  
the top of the head olive green. Sides  
white ... the upper half of the  
... pale yellow. The lower half together  
with all the other fins pale steel blue,  
the deeper ... the tips of the cau-  
dal ... of the soft dorsal  
and anal fins.

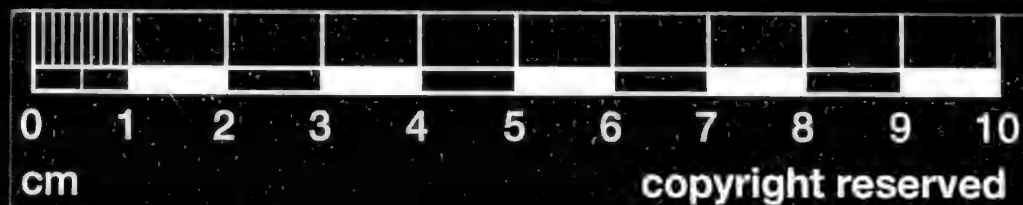
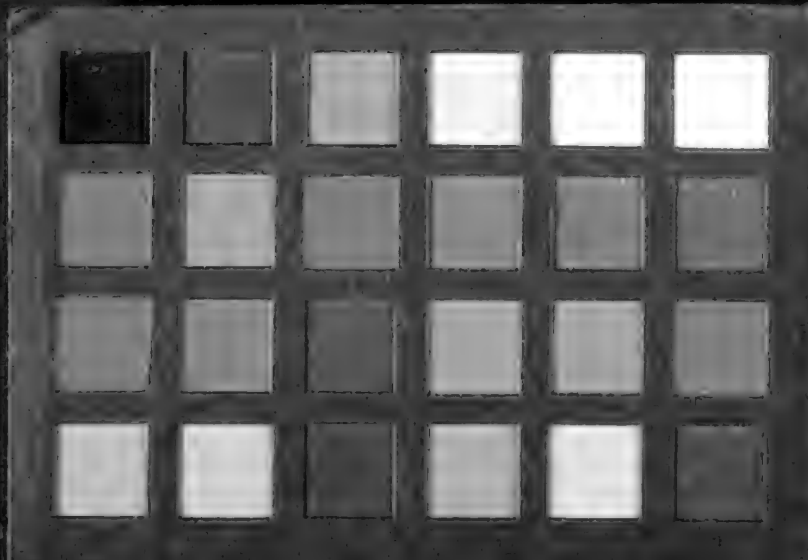
Length 2 to 4 feet.

Hab. ... The ...  
... description are from  
... length. The figure  
... is excellent.  
... be ... a distinct  
... from the ...





*Caranx melampygus*



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*Caranx* *seferdianus*

*Caranx* no 41

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Fig. 1. 8.2 pr. 1.12.16; length 1.12.16.

The greatest depth is equal to the length of the base of the anal fin is about two-sevenths of the total length of the fish. The head comprises about one-fifth of the total length, its upper line of profile is precipitately rounded, and rises up to the nape at an angle of about  $50^\circ$ , whence it ascends to the soft dorsal at an angle of about  $10^\circ$ , then falling  $20^\circ$  in the descent to the tail. The lower line of profile from the throat to the anal fin is nearly straight, falling at an angle of only about  $10^\circ$  to that fin, whence it continues to rise to the tail at an angle of  $30^\circ$ . The eyes are large, sub-circular, situated so that the median line of the body intersects their upper half, and their greatest diameter equals one-fourth the length of the head. The hinder tip of the maxillary reaches posteriorly as far as a vertical cutting the anterior third of the eye.

The dorsal fin commences a little nearer to the base of the caudal than the end of the snout, and passes over a base which is a little more than one-third the length of the whole fish. Its anterior fourth rises into a high triangular lobe, and a smaller one marks the anal fin. The small ventrals overlap the ventral fin and reach quite half way from their base to the anal fin. The pectorals are very slender, and are nearly

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MUSEUM

2

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0 1 2 3 4 5 6 7 8 9 10  
cm

about one-third of the fish. The caudal  
peduncle is thick up to the fish and the lobes  
are somewhat pointed.

Color bright silver with a violac-  
eous tinge, or in certain lights. The  
upper half of the body exhibits several  
very faint vertical bars, a light deep  
green tinge on the dorsal region, and on  
the sides of the head, which latter  
is light bluish in color of the eyes,  
and the lips are whitish. All the ven-  
tral fins are dusky steel, and the lower  
margin of the anal whitish. The pectorals  
are colorless except a tinge of yellow  
on their basal portion, and the ventrals  
are whitish tinged with steel blue.

Length 16 inches.

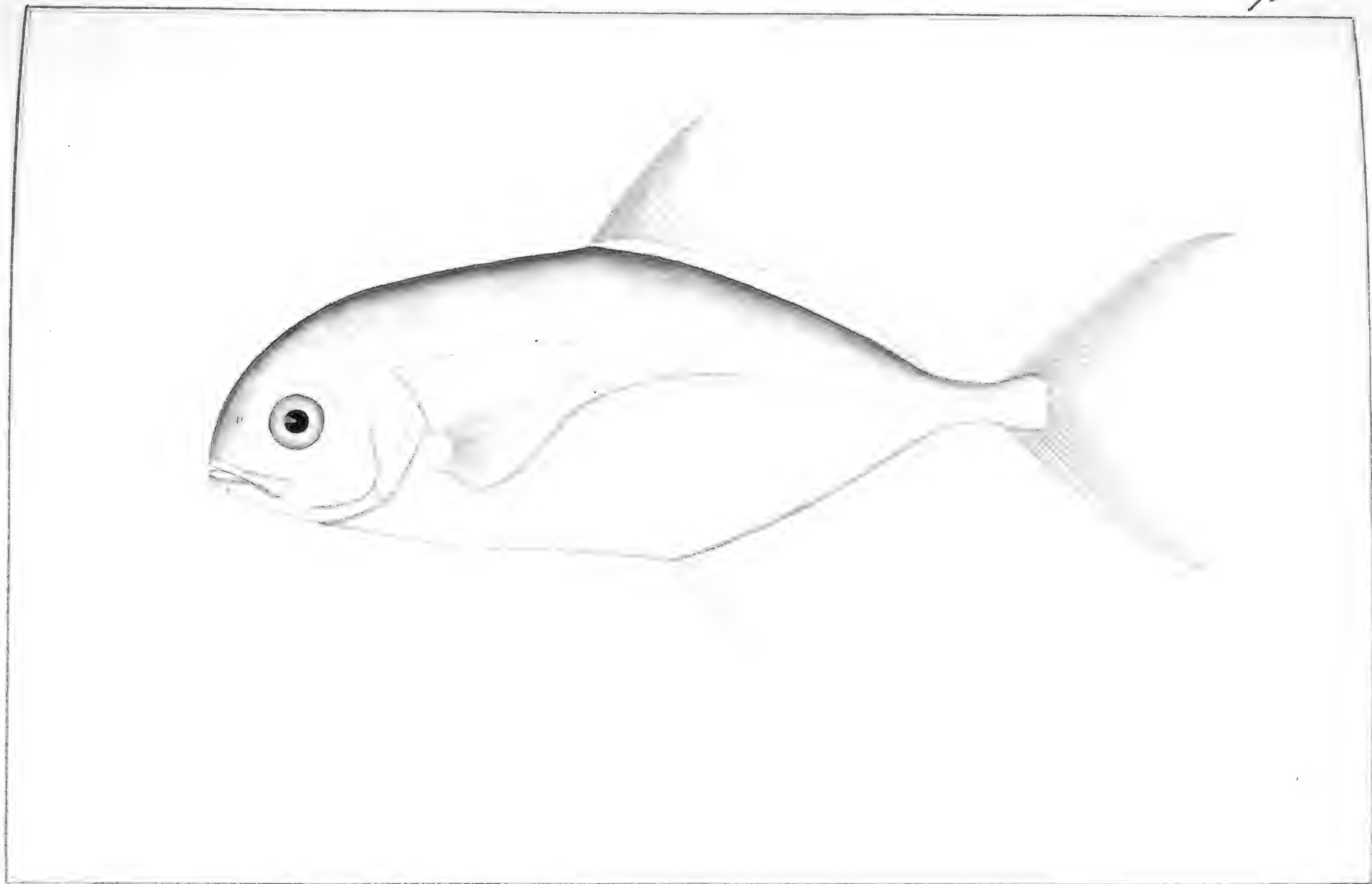
Habit Occurrence, etc.

This species was seen only once  
in the bay.

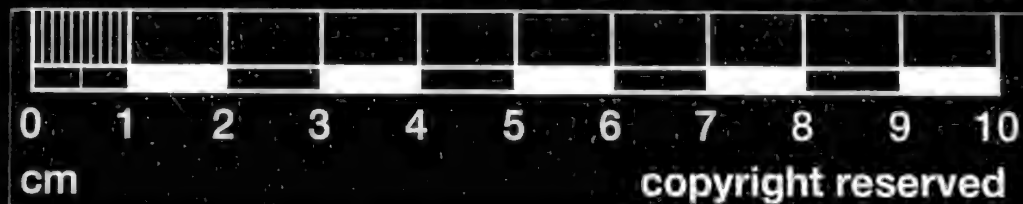
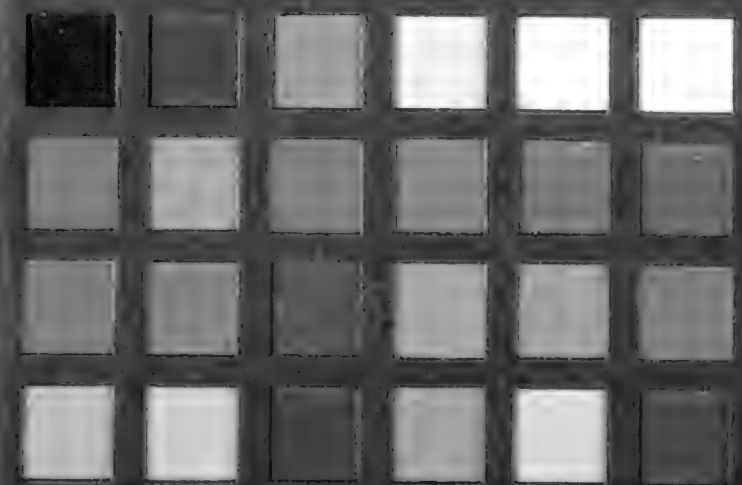


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HISTORY  
MUSEUM





*Caranx ferdau*







It is a small, with an iridescent  
glow, and the pectorals marked with  
the fine, vertical, small, greenish  
yellow spots with dark olivaceous  
center. The dorsal region is violaceous  
slate, reflecting bluish silver, and  
the belly is whitish silver. Muzzle  
slightly blue. Sides cupreous with a  
faint olive ring. The caudal fin  
is iridescent slate, becoming nearly  
colorless posteriorly, sometimes dark  
marginally, and the ventrals and first  
dorsal are nearly colorless. The basal  
portion of the pectorals are bluish  
and the soft dorsal and anal are nearly  
colorless except their prolonged portion  
which are iridescent slate or blackish.

Length 16 inches.

Hab. British Isl. Society Isl.  
At the present location its native name  
is Kahuha.

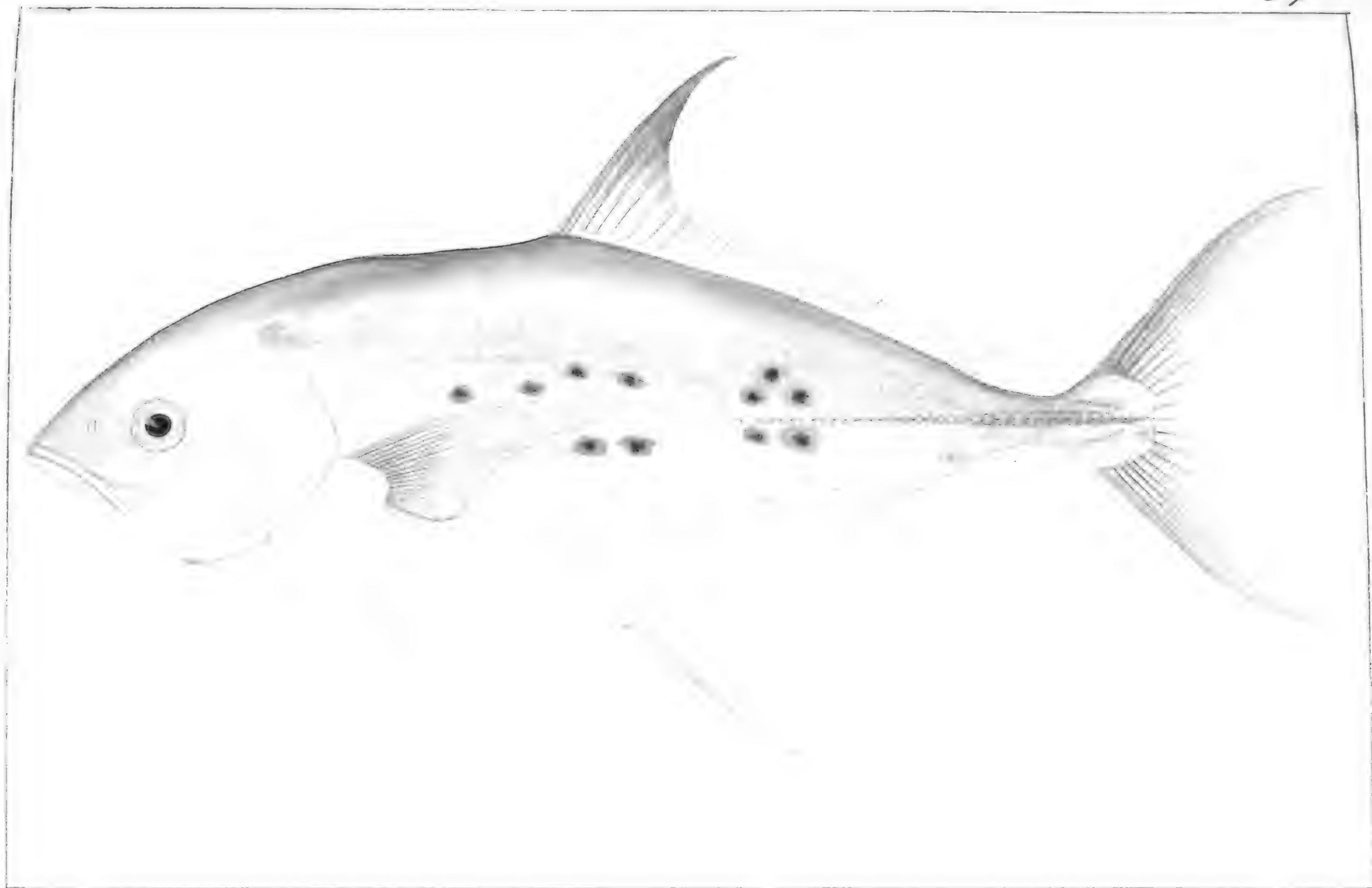
This species should be separated  
from the typical variety. The spiny dorsal  
is very small and the two spines in  
front of the anal fin are rudimentary  
and do not pierce the integument.

cm

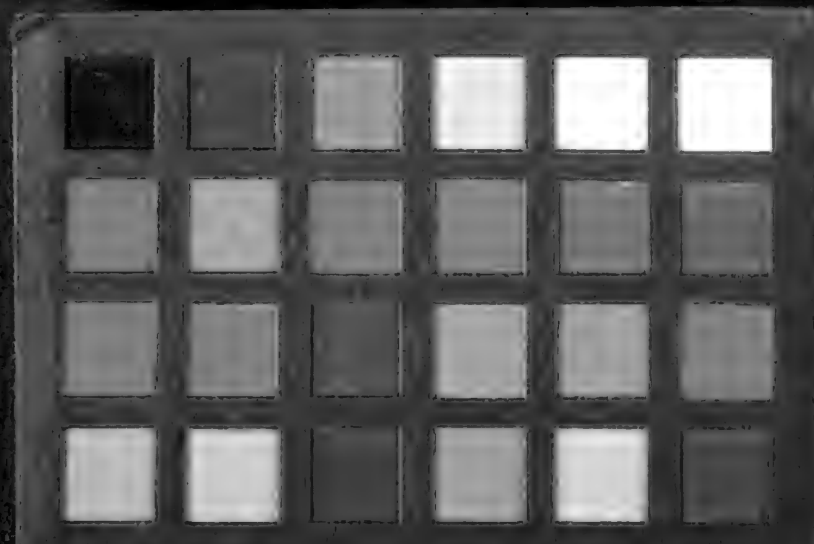
0 1 2 3 4 5 6 7 8 9 10

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*Caranx ferdau*



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as the white fish are pinker nearly to  
the base.

Color very gray beautifully iridescent,  
on the sides light reflecting bluish,  
gray bluish along the dorsal region sides  
yellowish white on the whitish and the  
pectoral light steel blue. All the other fins  
light at base, the soft dorsal like tipped  
with yellow.

Length 2 inches

Male female 4/10

cm

0 1 2 3 4 5 6 7 8 9 10

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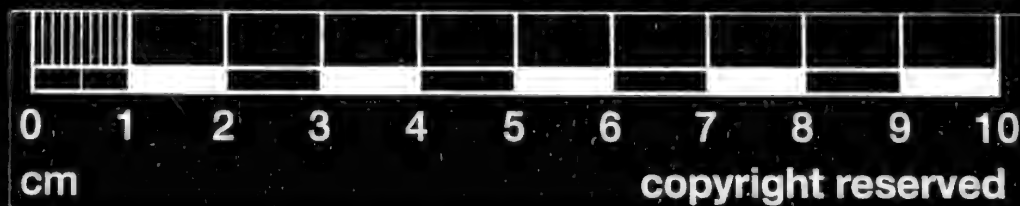
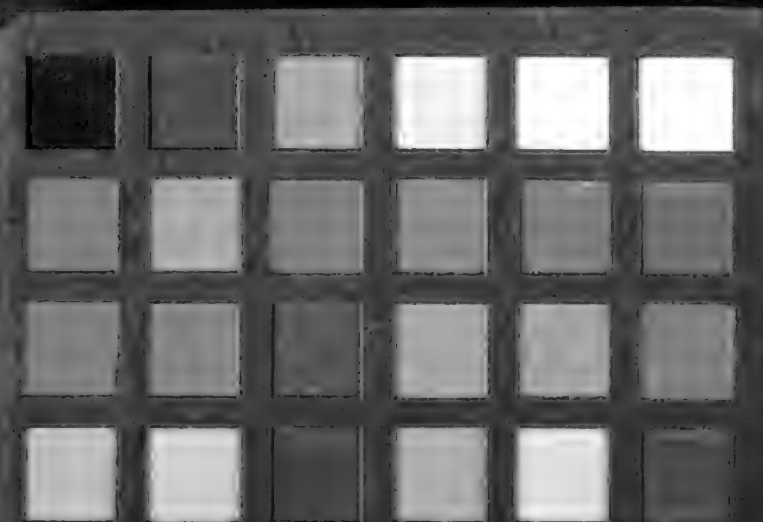


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*Caranx ferrugineus*



*hemigrammopterus*

*Caranx? etc 90*

B. 7; D. 7-35; A. 27; V. 1; P. 15, 13, 11, 4.

This species is considerably slender at the origin of the soft dorsal fin where the line of profile rather abruptly bends posteriorly preserving a slight convexity falling at an angle of about  $40^\circ$ . From the end of the snout the profile runs at an angle of  $50^\circ$  up as far as the opercular region, whence it rather suddenly falls to  $20^\circ$  and maintains that angle to the second dorsal in a nearly continuous line. The lower outline from the throat to the anal fin falls in a nearly straight line at an angle of  $10^\circ$ , and from the latter point it runs up to the tail at an angle of a rising of  $20^\circ$ .

The distance between the origin of the <sup>soft</sup> dorsal and anal fin is more than half of the total length of the fish. The head is deeper than long and comprises about one-fifth of the entire length. The large eyes are sub-circular, their diameter one-fourth the length of the head, the jaw is even, and the hinder tip of the maxillary extends back more than as far as the anterior third of the eye.

The first dorsal fin is small, arching, the third ray the longest. The soft dorsal arises at a point about midway between the end of the snout and the base of the caudal fin. It extends over a base equal to the distance between its anterior end and the origin of the anal fin, or nearly one-third the total

NATURAL  
HISTORY  
MUSEUM

0 1 2 3 4 5 6 7 8 9 10  
cm  
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the rest of the body with an even portion in  
greenish yellowish or tan, slender sub-  
cylindrical, which is longer than the  
head, the snout few lines similar but  
shorter, ventral fins 10 spines in series and fin  
the dorsal when laid back overlap  
the rest and each half nearly the anal fin  
the pectorals are paleiform, slender as the  
other but a little longer than the  
snout, the caudal is about two-sevenths  
of the total length of the fish, and forked  
nearly to the base, the lobes slender and  
about 1/2 of the

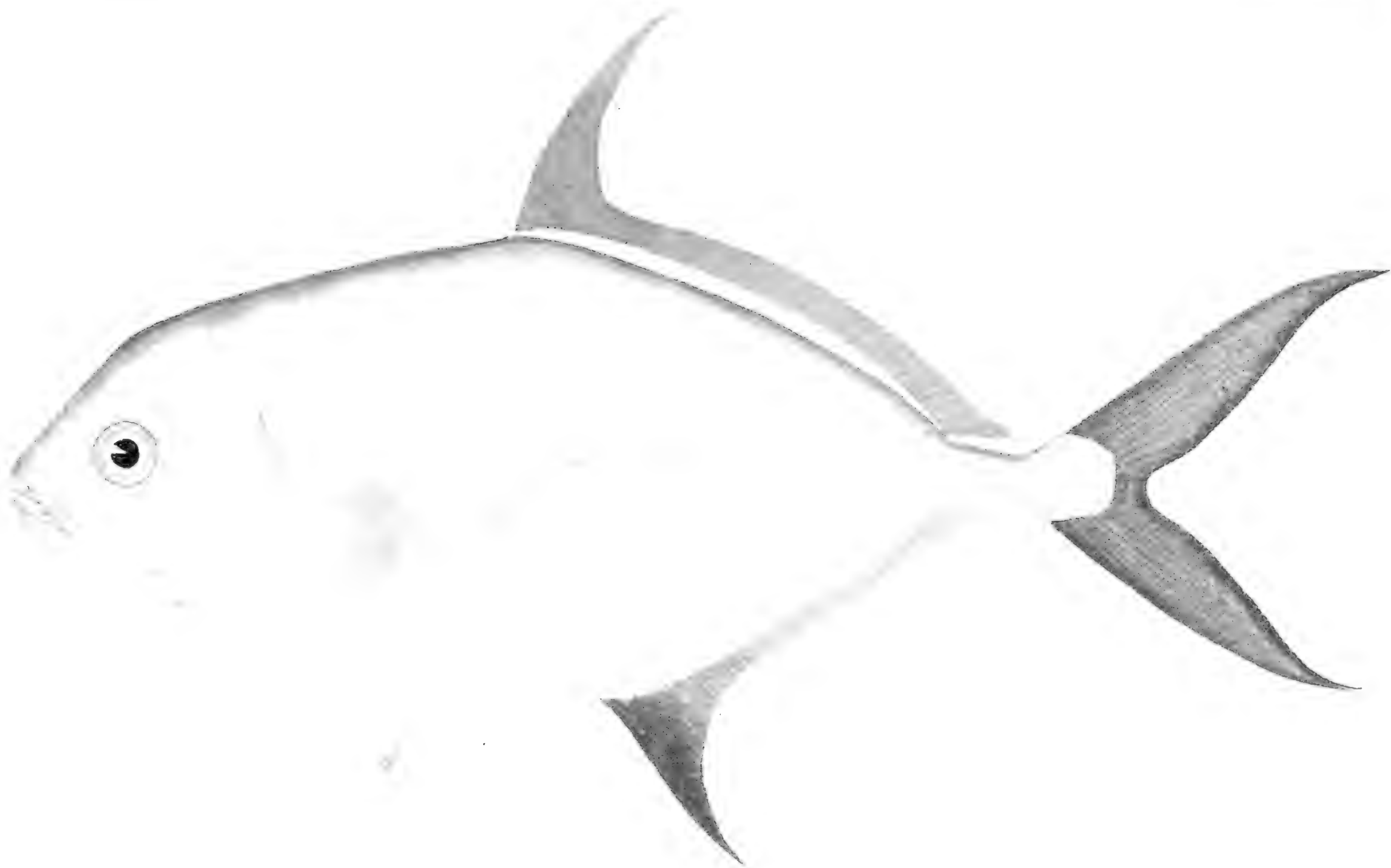
Head grayish silver with an  
iridescent gloss in certain light, may be  
above a dorsal vertical darker bar,  
which occupies the upper two thirds of the  
body, the sides shining clear, with soft green  
the front dorsal fin pale and pectorals nearly  
coloring the latter with a yellow tinge on  
their base, keels and the ventral tipped  
with dusky, the caudal is clear  
slate, frequently margined with blackish  
the soft dorsal and part of the anal  
slip yellow, the latter dark slate anteriorly  
and the lower margin white  
Length 10 inches

H. L. Smith, Isla

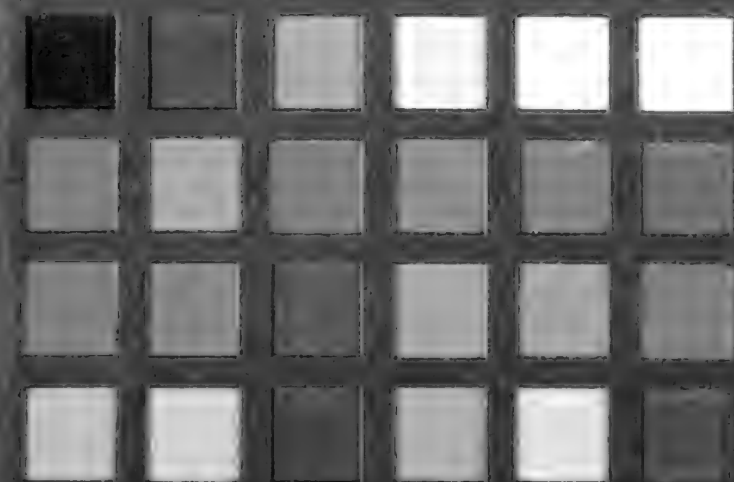
H. L. Smith, Isla



NATURAL  
HISTORY  
MUSEUM



*Caranx ferdous*



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HISTORY  
MUSEUM



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*Blapharis? lunulnichensis.*

D. 19; A. 16; V. 5; P. 19; C. 5, 1, 3, 7, 1, 4.

Color above pale bluish-ash, which gradually fades into lighter at sides, in the sides. Ventrals with ~~the~~ blackish filaments and a large black spot on the anterior portion of the dorsal.

Form oblong-ovate, strongly compressed. Skin smooth, scaling and without any apparent scales. The profile of the head rises at an angle of about 45° in a curved line. The body tapers posteriorly, and both outlines are gently arched. The lateral line commences at the upper angle of the gill opening and passes

which are much shorter, are gradually posteriorly so that the last is no more than one-third as long as the first. The remainder of the fin is very low.

The anal fin is very similar to the dorsal, with which fin it continues. The three anterior <sup>rays</sup> are prolonged into filaments.

The ventrals are short, being less than half as tall as the pectorals.

The pectorals are long pointed and pectiform.

The caudal fin is deeply forked.

Length 4 1/2 inches.

Habitat: China.

NATURAL HISTORY MUSEUM

0 1 2 3 4 5 6 7 8 9 10 cm

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slightly upward, then downward apically, in a curved course to meet the middle of the distance between the preopercular angle and the base of the caudal fin, then straight to the tail, having slight indication of armature at its termination. The head constitutes about one third of the fish, caudal fin excluded. The eye is very large, and placed about midway between the tip of the snout and the hinder opercular margin. Mouth oblique, gape moderate, and the teeth in both jaws are disposed in dense villiform bands.

The dorsal fin is long, and the seven anterior articulated rays are prolonged into long filaments; the <sup>first</sup> reaching far behind the caudal, and the others six which are much shorter, are graduated posteriorly so that the last is no more than one-third as long as the first. The remainder of the fin is very low.

The anal fin is very similar to the dorsal, with which fin it columnates. The three anterior <sup>rays</sup> are prolonged into filaments.

The ventrals are short, being less than half as tall as the pectorals.

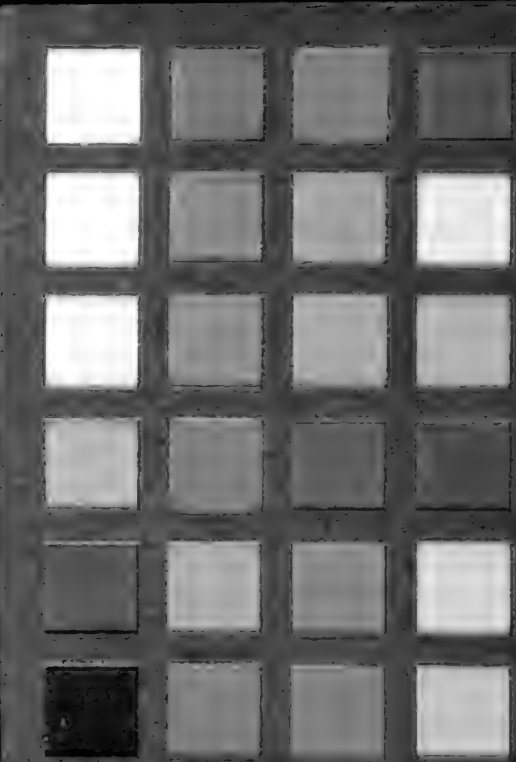
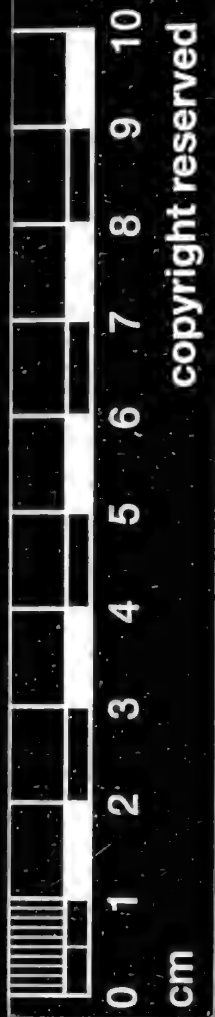
The pectorals are long, slender, and palciiform.

The caudal fin is deeply forked.

Length  $9\frac{1}{2}$  inches.

Hab: Vahia.

NATURAL  
HISTORY  
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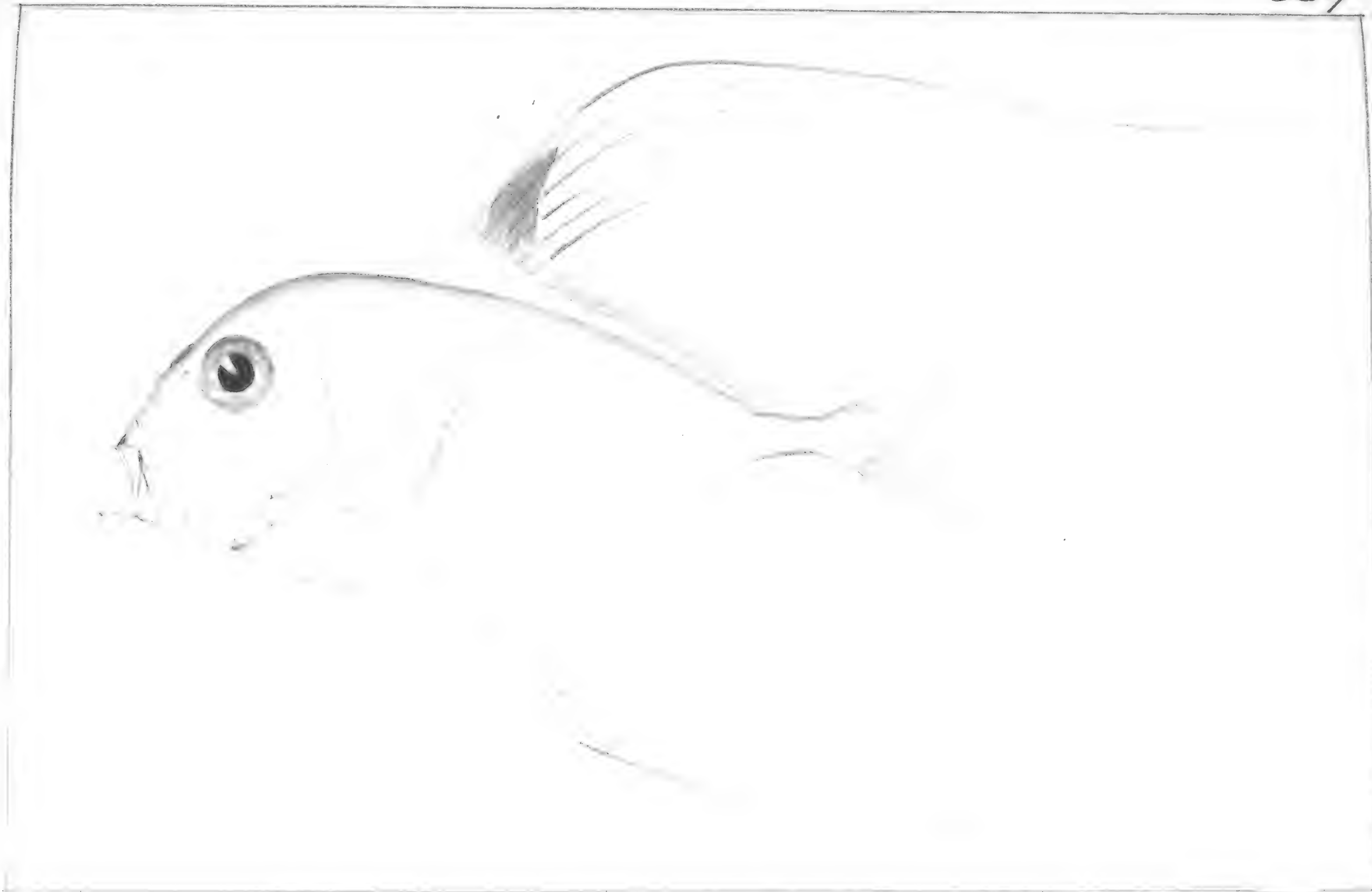
Remarks. This rare fish was taken near Honolulu, and is now in the Collection of Mr. H. Pease, who kindly loaned ~~us~~<sup>me</sup> the specimen for description. Owing to the dissipation of its various parts, it is impossible to determine with precision many of its specific characters; consequently, discrepancies may be found in the preceding description of comparison with the living fish. Just in view of the dorsal fin, in the dried specimen there appears to have been a range of several small free rays, and a similar one in front of the anal fin. It is with some hesitation that <sup>we</sup> refer it to the genus Blepharis which are said to have long ventrals, though otherwise agreeing with our fish.



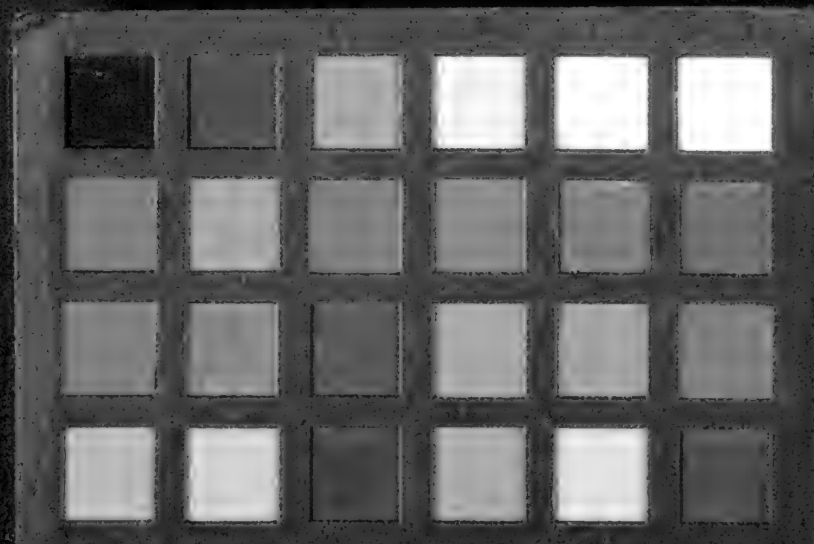
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HISTORY  
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*Caranx ruber*



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HISTORY  
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*Parus scyrops*!

body deep, compact, and the  
 tail, under the wing, is short and  
 notched. The wings are of a  
 very even shape, and the  
 length of the tail is about  
 equal to the length of the wing.

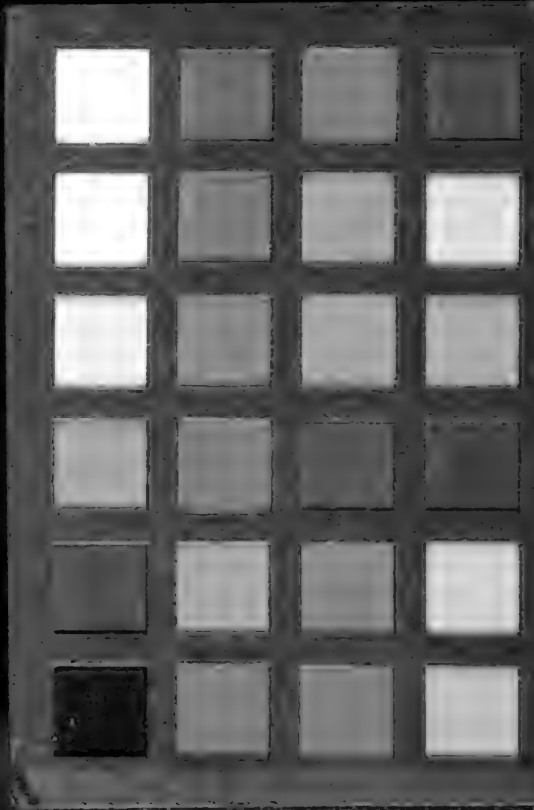
The tail is composed of 12 feathers.  
 The lateral ones are the longest,  
 and its posterior part is very  
 carinated. The middle ones are  
 very little cut away, and the  
 of the tail, reaching to the  
 dorsal fin, which together with the anal  
 have small spines at their anterior  
 edges; both fins are long, except the anal  
 fin, which is very short, and  
 the anterior ones are falling into  
 long filamentous, and the dorsal  
 sub-falciform, banded bifurcate.

*Scyrops*! 72 *Parus galus*

B.b; D. 12; L. 12; T. 12; P. 12; A. 12

The greatest depth of the body  
 is at the origin of the wing, and  
 one half of the total length is  
 included. The upper and lower  
 are very strong, and the  
 thickness which is at the base of the  
 head, equals the growth of the tail  
 just alluded to. The upper part of the  
 file commences at the chin, and  
 with a sudden curve to the back,  
 thence with a gentle curve

NATURAL  
 HISTORY  
 MUSEUM



...the dorsal  
...equally descends in a straight  
...the tail. The ventral  
...the other to the ventral fins  
...the latter fins to  
...and posteriorly con-  
...the upper to the upper  
...along the base  
of the dorsal and anal fins. The caudal  
...taper to  
...is deeper than  
...the mouth of the fish. The teeth are dis-  
...the hinder tip of  
...that would  
...of the pupil.  
...in shape and  
...about four times  
...the base. Perhaps just in  
...of the body, both curved, elliptical  
...the body.

...lightly near  
...the caudal than the end  
of the ... soft rays  
...into slender fil-  
...the caudal  
...large and com-  
...to the dorsal in  
...and has only  
...a filament. The ventral  
...as the  
...the  
...the  
...black  
...Length 22  
...name Anavara. (Haw.)



NATURAL  
HISTORY  
MUSEUM



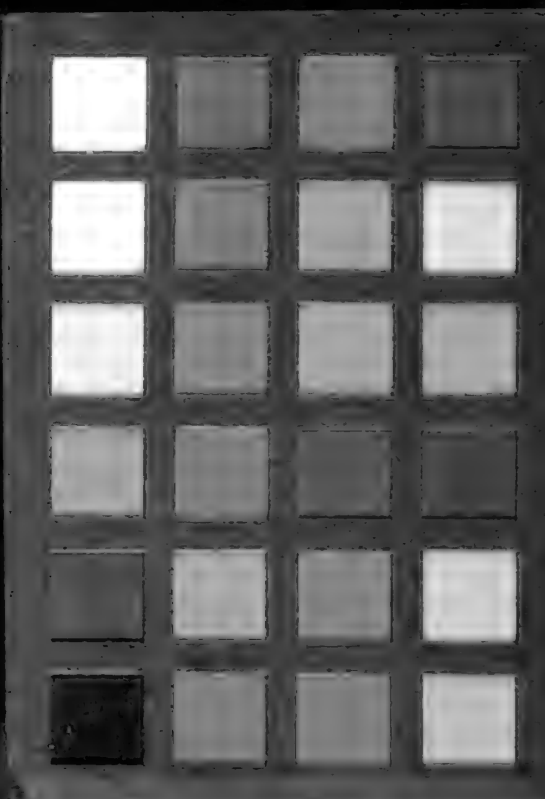
remora

*Scheneis*

This little Scheneis was found attached to a shark, captured off the island of Maui, one of the Hawaiian group. It was found when captured, and the colors probably were faded during capture, and white to brown. When alive it was a very light, nearly uniform slate black.

The head is small, the body the of the total length, being longer than the body, and in the middle of the dark band, one fourth of the entire length of the body. The depth of the body at the middle of the dorsal fin is compared to the length of the fish as one to nine. The dark band comprises one third of the total length, and is twice as long as the dorsal fin. The laminae are 17 in number. The dorsal fin is oval, their length entering at about the length of the head, and is nearly equal in extent between the end of the snout and the rounded margin of the gill covers. The dorsal fin is above a rounded snout, and a small profile is present. The hinder end of the maxillary bone is not quite with the anterior border of the eye. The teeth are disposed in a row like bands, the external ones the longest.

Both dorsal fins are similar in size and position, opposite, and start from a point midway between the end of the snout and the end of the dorsal fin.



gradually tapering away posteriorly; the  
 four anterior rays are much wider, the  
 next being 10 to 12 times the remainder diameter.  
 The scapular is concave. The pectorals are  
 somewhat the same length as the ventrals.

Length 2 inches.



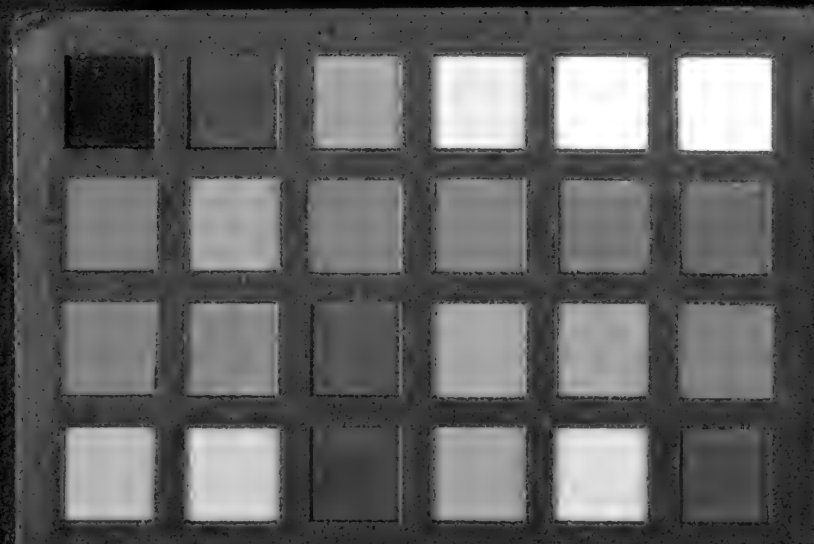
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 MUSEUM





*Caranx gattus*



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HISTORY  
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the maxillary reaches a vertical position,  
just in advance of the center of the eyes.  
The greatest depth of the body is about equal  
to the distance between the end of the snout  
and the anterior termination of the dorsal  
fin.

The seven anterior rays of the dorsal  
fin, and the first five of the anal are  
enlarged into slender filaments, the number  
of which are larger than the pinnules.

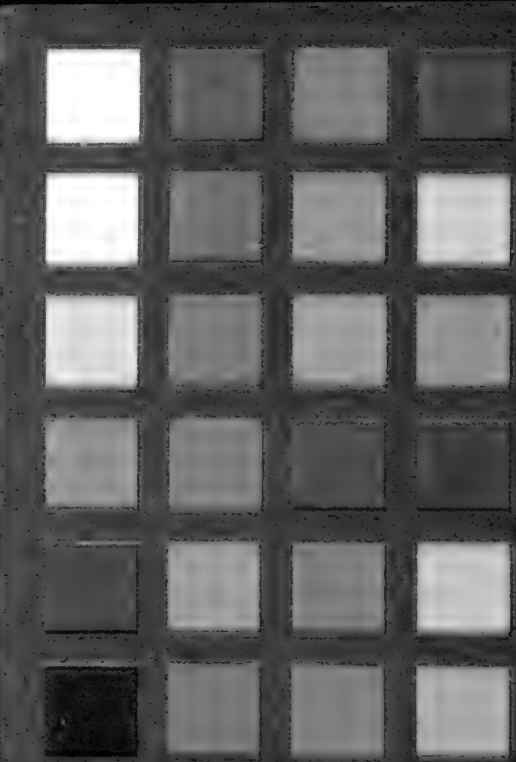
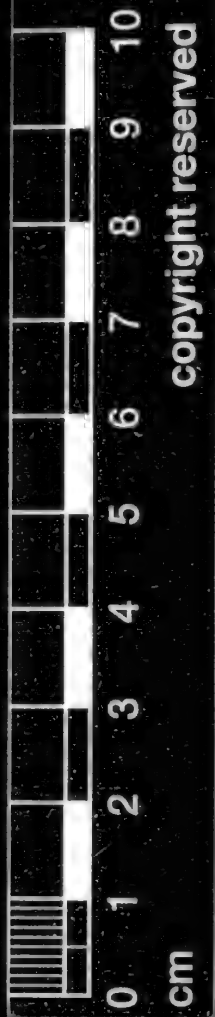
Color brilliant silver, becoming more  
violet above, and the upper half of the body  
marked with more or less vertical bands of  
a deeper steel blue. The lower half of the body,  
and the anterior portions of the dorsal and  
anal, blackish. The other lines colorless.  
Length, 5 inches.

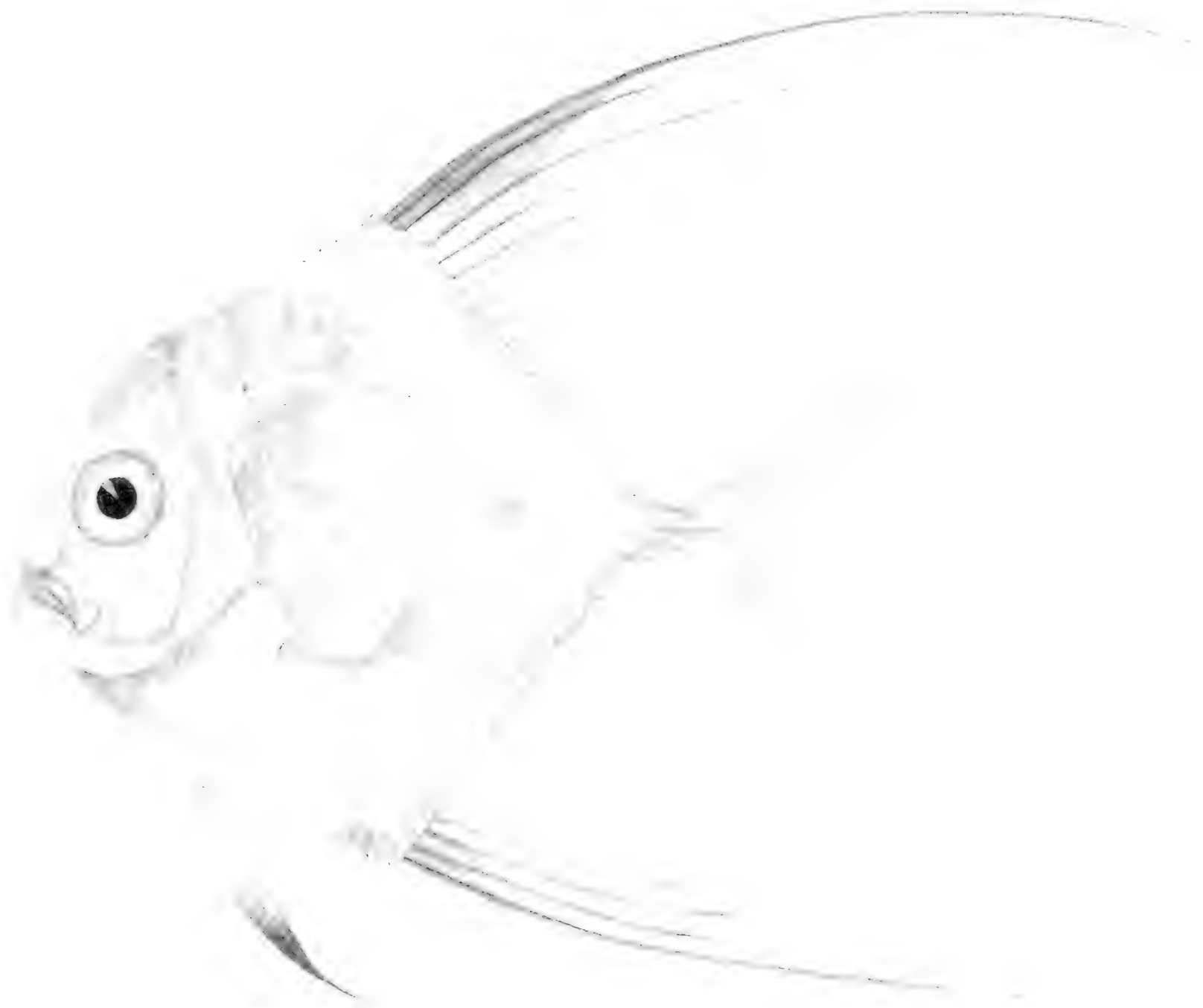
Habitat: Hong Kong.

Locality: near "Kowloon".

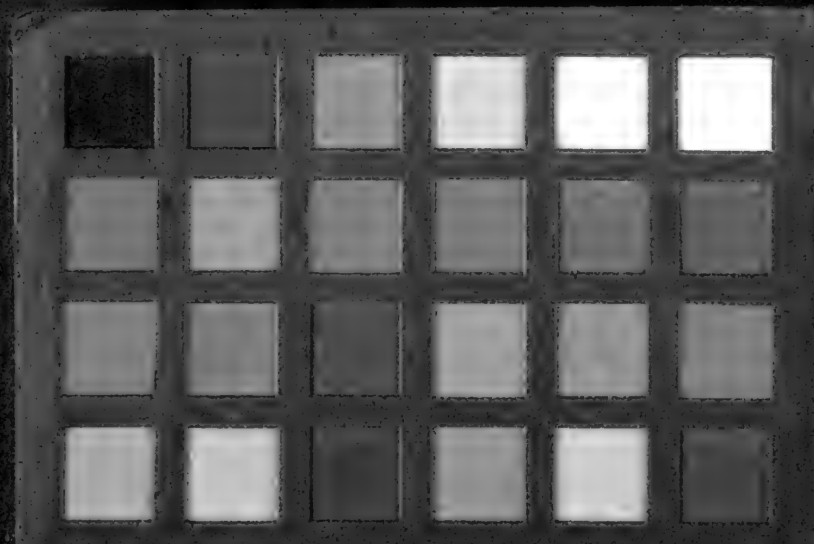
Remarks:—he obtained two specimens  
of this species at the above locality. It is  
confused with *Sphyrna tiburo*, but the  
body is not so deep, the dorsal fin is  
longer and the anal more branched.  
There are more bony scutes on  
each fin.

NATURAL  
HISTORY  
MUSEUM





*Caranx ciliaris*



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HISTORY  
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*Blapharis fasciatus*, nov. sp.

Length 1.5 inches, height .45, weight .15.

The greatest depth of the body, against the entire width of the fish, excluding the caudal fin in the measurement. The head, which is very pointed, comprises one third of the total length, a vertical line runs from the hinder corner of the maxillary, touches the anterior limb of the orbit. The diameter of the eye equals one third the length of the head.

The six anterior soft rays of the dorsal are prolonged into slender filaments, the first seven the same, the eighth is three times the width of the first, the others of little become broken, the anal rays are filamentous rays, which are shorter than those of the dorsal. The anal is very long, narrow, and the pectorals are slender. This fish is unicolorous.

Color silvery on the sides and back. Ventrals and anal white. Scales to the upper half of the body, scales to the length 5 inches.

Habitat: Linné's Lake.

Remarks: This is a new, but not a new fish. It is called "Hua-mohui".

NATURAL  
HISTORY  
MUSEUM

2



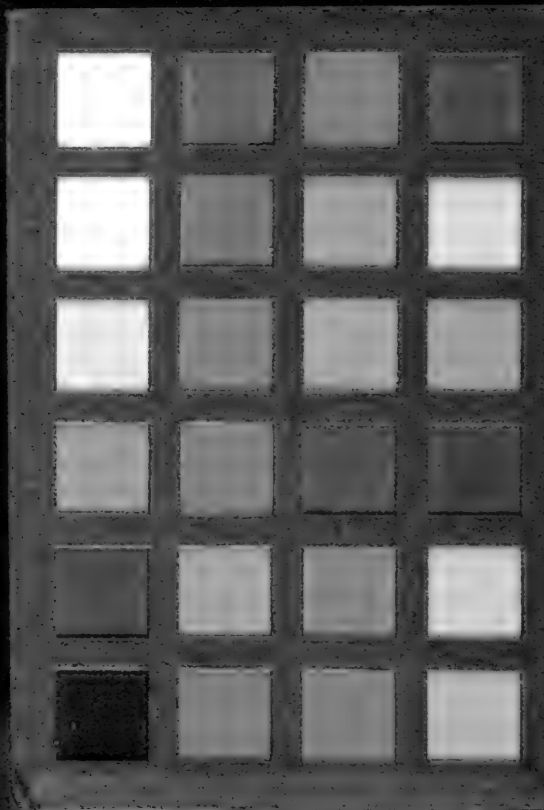
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124



*Caranx ciliaris*



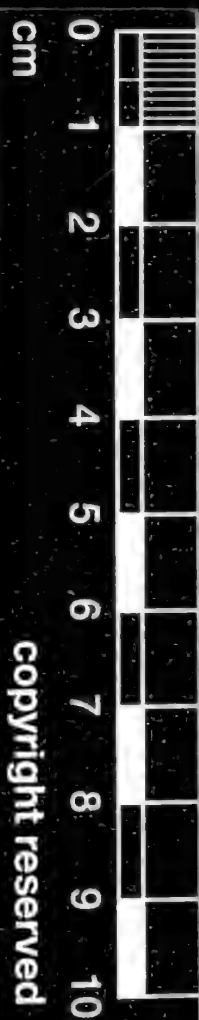




the dorsal fin is set rather over top. The second  
ray part of the whole is of nearly equal  
length, and the third is a small one very low.  
The second dorsal is contiguous to the first, and  
set in the same manner as to the base of the  
caudal than the end of the snout. Its anterior  
portion which is triangular is about the  
same as to the anterior fin, and extends  
over a base equal to one third of the total length  
of the first dorsal. The fin is very low and  
the last ray is slightly longer than the anal fin  
of the same structure, but shorter in its  
base than the upper to fin. The small anterior  
fin is beneath the origin of the soft dorsal, and  
the rest is moving it on. The base of the ventral  
fin is the same slightly posterior, and in length  
equal the height of the dorsal. The pectorals are  
very long, slender and their length comprises  
a little more than a fourth of the length  
of the body. The caudal is profoundly forked  
in color strong with a yellowish gloss  
on the plant and absolutely fasciated in  
a regular manner with darker. The lower  
lateral line is only a line in certain lights.  
The belly is white and the dorsal region  
is marked with a black spot  
marks the upper angle of the gape. The  
belly is strong the dorsal fin, up per  
half of the body dorsal and caudal tinted  
with yellow. The other fins colorless.

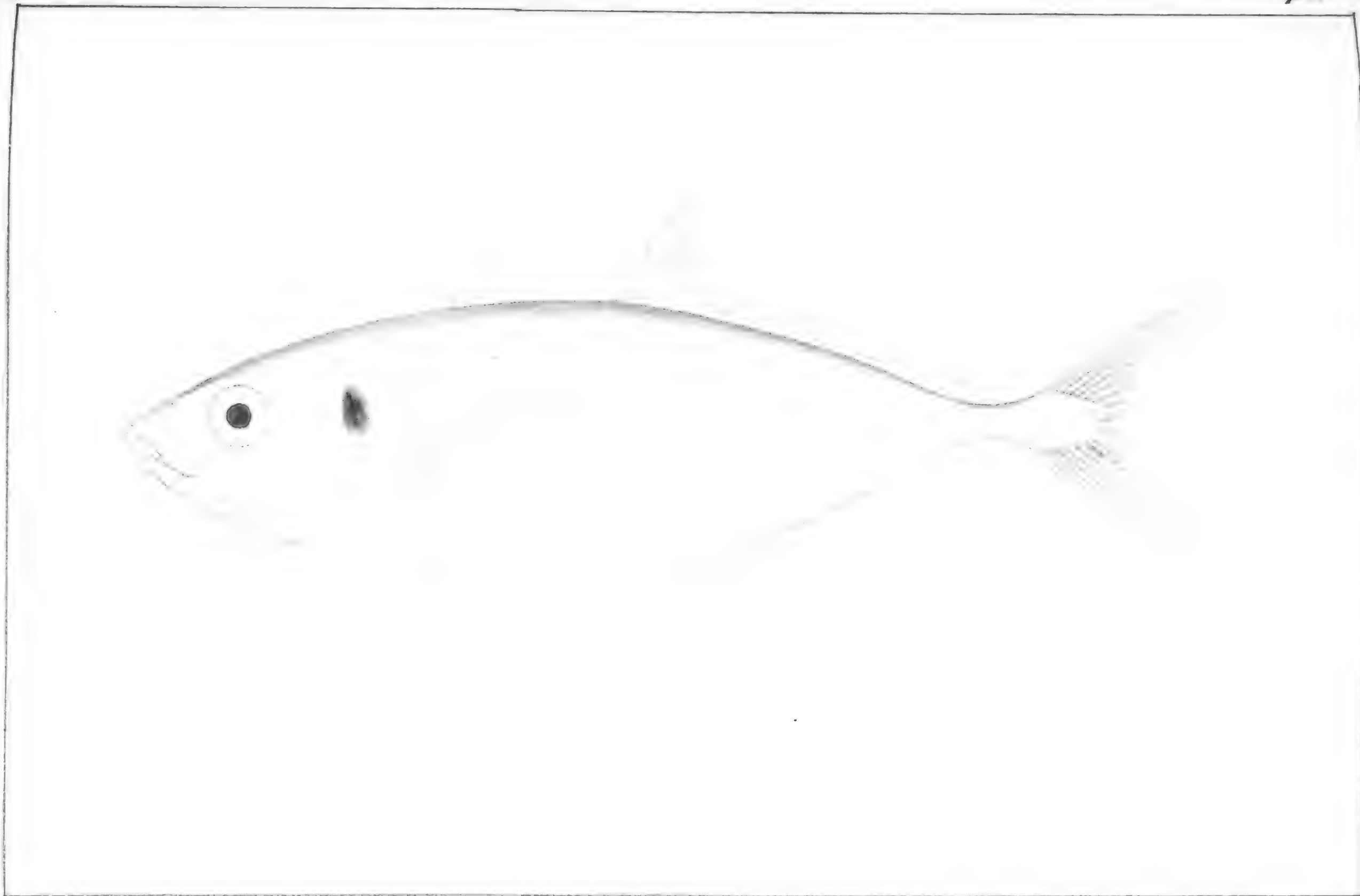
Length 10 inches

Habitat: To Blue

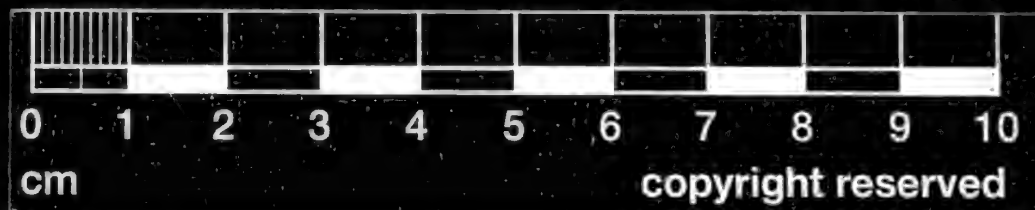
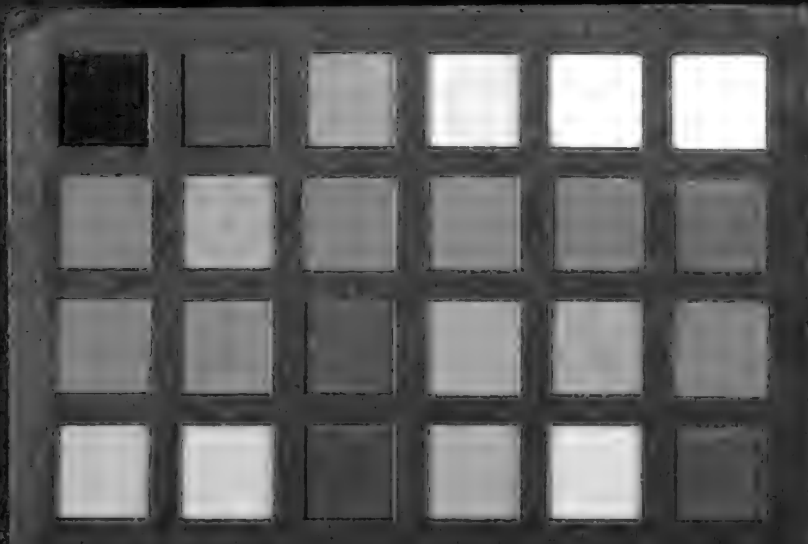


NATURAL  
HISTORY  
MUSEUM



*Caranx*

165



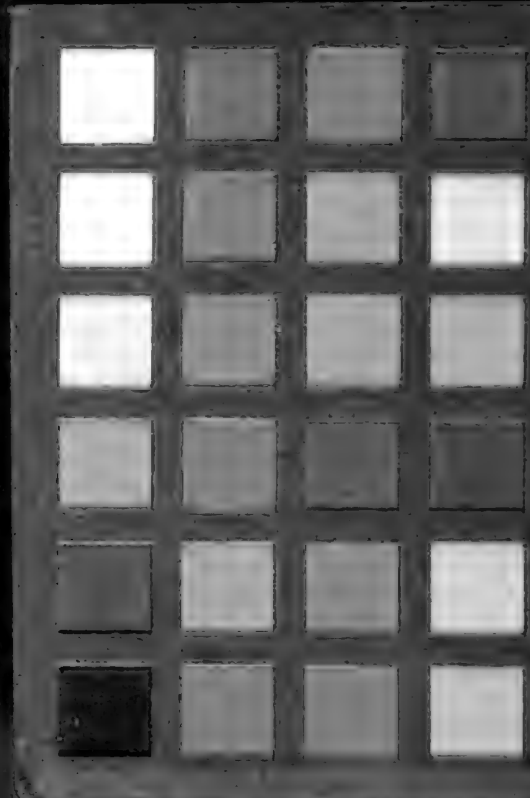
**N** NATURAL  
HISTORY  
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*Verucula bairdianus*, *Verucula*

Big, 5-6 mm. long, 1.5 mm. high, 1.5 mm. wide, 1.5 mm. deep. The body is elongate, more arched along the dorsal region than beneath, and the greatest depth of the body, which is at the commencement of the second dorsal fin equals the length of the body. The upper outline from the snout to the origin of the soft dorsal is regularly but gently arched, rising up to the depth of an angle of about 15° from the origin of the soft dorsal. The profile descends in a nearly straight line to the tail. The lateral line is rather eccentric in its course to the tail. The eyes are large, oval, their greatest diameter extending just five times in the length of the head. The hinder tip of the maxilla extends back as far as a vertical intersecting the anterior border of the eye.

The first dorsal fin commences at a point immediately over the base of the ventral fin, and its height, the distance from the latter which gives the fin a certain outline. The first ray, which is bony, is not examined in the formula. The second dorsal arises at a point midway between the end of the first and the hinder terminus of its own base. Its anterior portion is about three times the height of the first dorsal, and as compared to its

NATURAL HISTORY MUSEUM





second, third is slightly  
curved, and the remainder of the fin  
is straight.

The anal fin commences opposite  
to the eighth soft dorsal ray, and passes  
over a base nearly as long as the head.  
It is not quite so deep anteriorly, but more  
so posteriorly than the fin above, with  
which it terminates just in advance  
of the fin over the caudal peduncle from  
the base of the ventral to the origin of the  
anal fin. It is transferred forward just  
before the end of the snout. The ventrals  
are half as long as the head and the  
length of the peduncle equals half the  
length of the anal base. The caudal is  
deeply forked, the lobes elongate tri-  
angular.

Color pale bluish slate, glossier  
with bluish silver, passing in to olive  
slate above and white beneath. The  
upper portion of the head  
is greenish, the lower part of the head  
yellow. The dorsal fin is greenish  
to the caudal fin. The first dorsal  
is light greenish yellow and the caudal  
is light greenish slate shaded  
posteriorly with greenish yellow. The  
other fins more or less tinged  
with the latter hue.

Length 10 inches

St. Lawrence Island

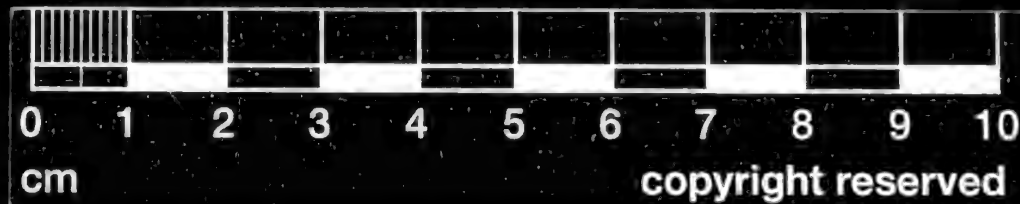
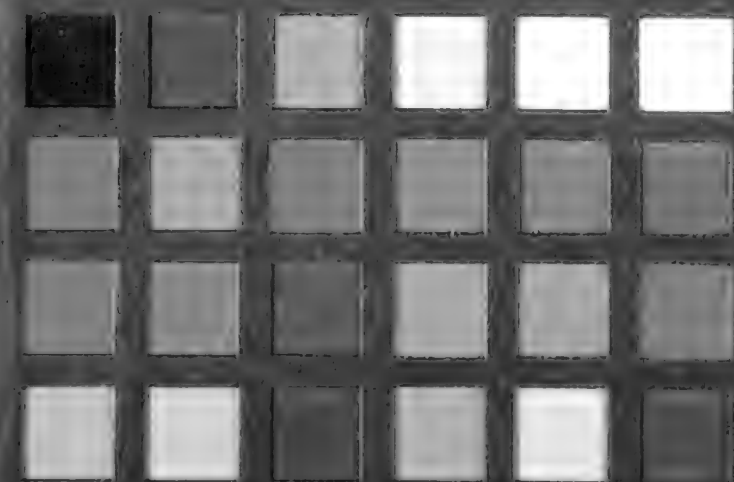
at very young specimen

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*Seriola dumerilii*



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Seriola bipinnulata, List 3.

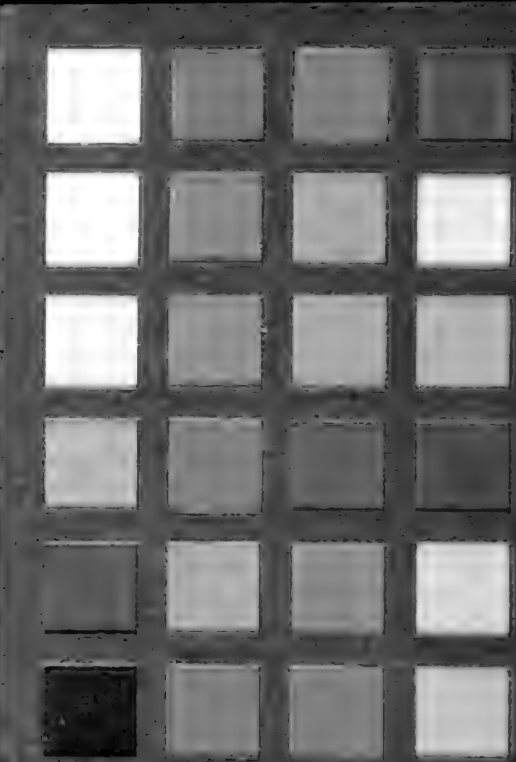
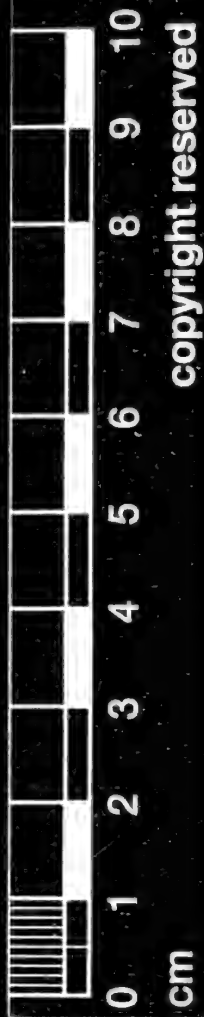
Seriola bipinnulata, (Forsk.) (Mull.)

Body elongate, compressed, slightly flattened.

The head is small, the snout is short, the mouth is elongated, the upper jaw is similar, both converge at the front and terminate at the base of the anal fin, the greatest depth of the body is immediately beneath the origin of the anal fin, the greatest thickness of the body is a little more than half of the above measurement, the pectoral fins are five times one third the body length, the eye is of moderate size, its greatest diameter about one sixth the length of the head and is set in the median line, a little nearer to the eye of the snout than the hinder margin of the opercle, the dorsal fin of the body reaches a little posterior to the hinder nasal opercular process, the pectoral fin reaches the lateral line, a little posterior to the pectoral fin, the median line of the body a little posterior to the origin of the anal fin.

The small opercular fin is arched and extends close to the anal fin, the soft dorsal fin is in midway between the base of the pectorals and the origin of the anal fin, and is more than one third the length of the body.

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HISTORY  
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greatest depth equals the space between  
the eye and the base of the snout. Posterior  
to the 8th or 9th ray the fin is low,  
almost disappearing in altitude to its  
anterior end, where the two last rays  
are in fact separate finlets.

The anal fin commences opposite  
the front of the first dorsal ray, similar in  
structure to that fin, and extends over a  
space a little longer than the head.

The pectoral and ventral are small,  
and slightly incurved on their extreme margins.  
The large caudal is deeply forked.

The upper third is deep dusky  
bluish, the lower light olivaceous, band  
marked with bluish steel extend  
from the eye of the snout to the base  
of the caudal peduncle. Sides of the same  
color as the lower beneath the lower light  
margin. The lower parts are bluish steel,  
and the belly is white. Under along yellow  
or reddish white line. Spines dorsal  
and anal light olive, the former tinged  
with bluish steel along the base, and  
the latter with white. Ventral mottled  
with olive and white. Pectorals steel blue.

Length 2 feet 4 inches.

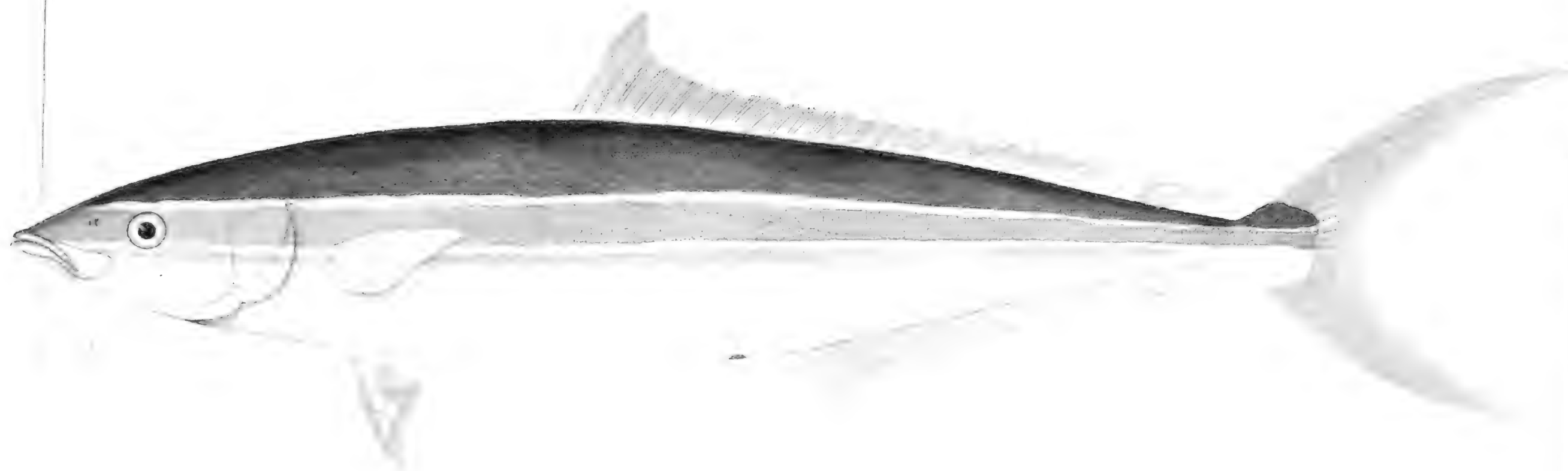
Habitat - open water.

We have seen but a single example of  
this species, which was captured outside of  
the city of New Orleans. It was  
sent to me by a specimen was obtained at New  
Orleans. This species is colored with red  
yellow and green. It is a common number  
of the

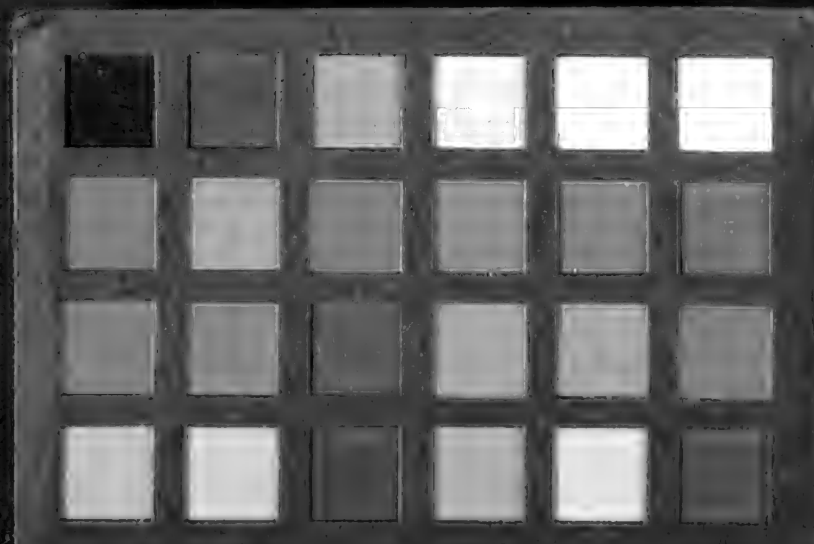


NATURAL  
HISTORY  
MUSEUM





*Seridichthys bipinnulatus*



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NATURAL  
HISTORY  
MUSEUM

*Form. lamellata, rapin.*

Form elongate, sub-pyriform, compressed.  
Tail with a horizontal keel.  
Head sub-cylindrical; chelicerae small. Mouth with  
a moderate oblique gap; lower jaw the longer.  
Teeth numerous, fine disposed in bands. The  
long dorsal preceded by a few small free  
spines, each with a posterior triangular  
membrane. A shorter portion of the dorsal is  
deeper. A tail similar, shorter, and columnar-  
ated with fine irregular preceded by two  
small free spines. Ventrals bifurcated. The  
ventrals are posterior to the pectorals.





*Lanceolus ductor*, Lin.

*Pilot piscis*, Linn., *Systema Naturae*, p. 156.

*Lehrmannichius*, Gmelin, *Fishes of the Baltic*, p. 325.

*Leander* & *monophyllus*, Linn., *Zooph.*

p. 219.

*Gasterosteus ductor*, Linn., *Systema Naturae*, vol. 1,

p. 14.

*Leander ductor*, Gmelin, *Her. Nat.*, p. 36.

" " *Beck*, *Comp. Natur.*, p. 78.

pl. 12, p. 12.

" " *Black*, p. 35.

" " *Thunberg*, *Icones*, p. 15.

*Lanceolus ductor*, Linn., *Systema Naturae*, vol. 1,

p. 14, pl. 12.

" " *Gmelin*, *Her. Nat.*, p. 36, pl. 12.

" " *Beck*, *Comp. Natur.*, p. 78, pl. 12.

p. 14.

*Gasterosteus ductor* Linn., *Systema Naturae*, vol. 1,

*Lanceolus ductor*, Linn., *Systema Naturae*, vol. 1,

p. 14, pl. 12.

*Gasterosteus ductor*, Linn., *Systema Naturae*, vol. 1,

p. 14, pl. 12.

*Lanceolus Ductor*, Linn., *Systema Naturae*, vol. 1,

" " *Beck*, *Comp. Natur.*, p. 78, pl. 12.

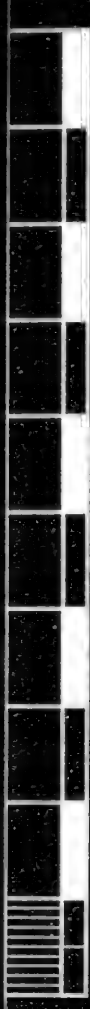
*Lanceolus*, Linn., *Systema Naturae*, vol. 1,

p. 14, pl. 12.

B. 1. 2. 4-29, etc. 1; etc. 1; etc. 1; etc. 1; etc. 1.

NATURAL  
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The dorsal fin extends over a base equal to one third the whole length of the body. It commences at a right angle between the end of the snout and the base of the caudal peduncle. There is then rapidly to pass away and the remainder proceeds nearly in a straight line. The anal starts from a point opposite to the posterior soft dorsal rays. The vertebrae are pointed, but when laid back do not touch. The anal is once there and a half the length of the dorsal as the vertebrae. The caudal is deeply bifurcate, the upper lobe concave laterally.

Color above. The dorsal region blue  
ish-black; sides blue-black. Ventrals  
white. Sides ornamented with five pale  
vertical blue-black bars, three of which  
ascend the dorsal process. These are con-  
tinued across the anal. A dark bar in  
the occipital region. Ventrals strong shades



with brown, all the fins have a strong  
black line, deeper on the external half  
of the ventral, and a blue bar marks  
the middle third of the caudal.

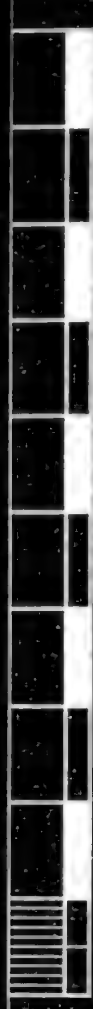
Length, 8 inches.

Habits. In all respects similar  
in its habits.

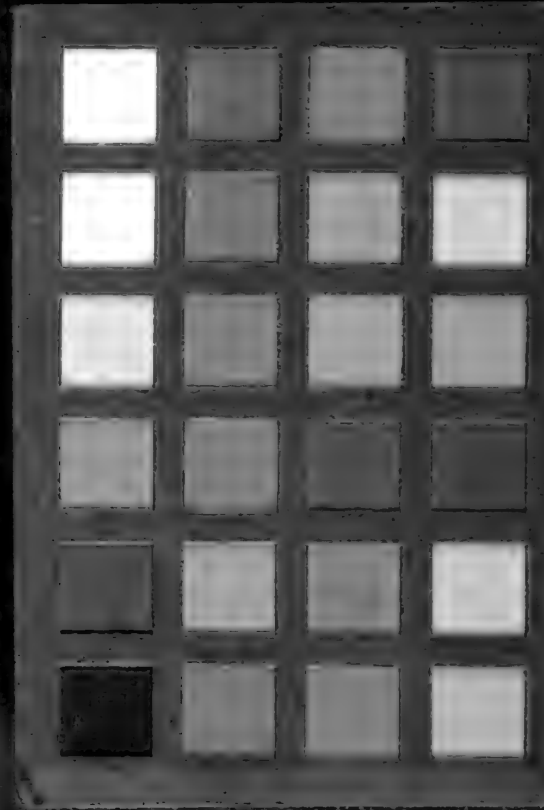
Remarks. — An all-fish-like  
and a wide wide animal. I have seen  
them in the Atlantic, except one from  
Mass. At that time, a common one following  
sharks, they have received the vulgar  
name of pilot fish from the sailors  
supposition that they guide their large  
fishes to their prey. I have seen num-  
bers of them following the vessel at sev-  
eral days, sleeping close under the bot-  
tom water in order. I have also remarked  
we caught a shark, the pilot continued  
to follow the vessel until another shark  
makes its appearance when they attack  
the protection of that sea-monster. It is  
evident then, that they go to sea to  
for protection from their enemies.

Our present one description is from  
a specimen captured at the Antigua Is.

NATURAL  
HISTORY  
MUSEUM

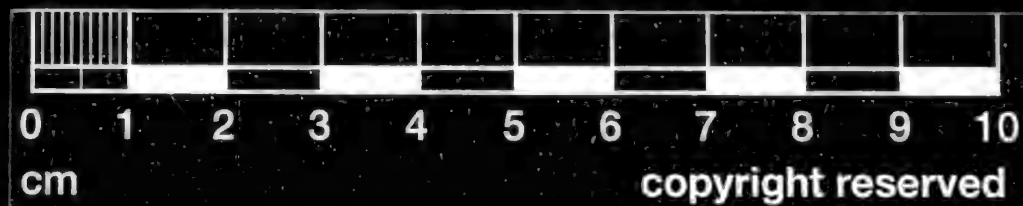
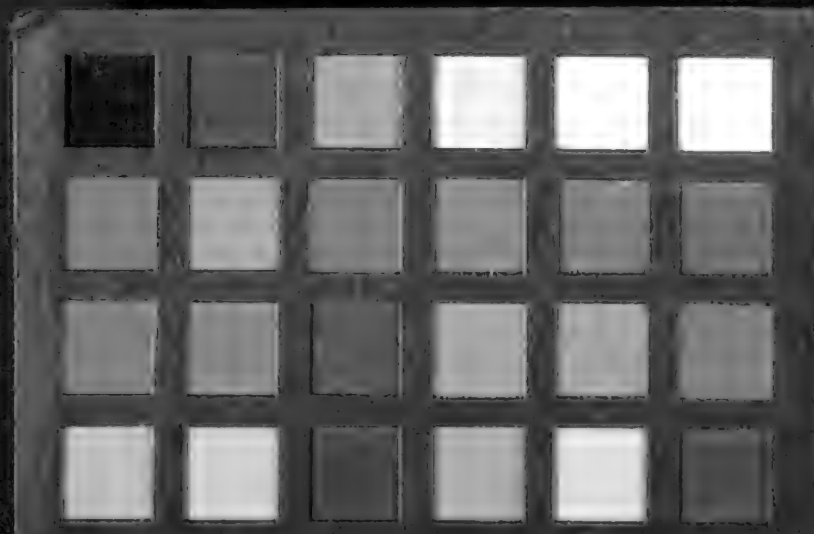


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*Naucrates ductor*



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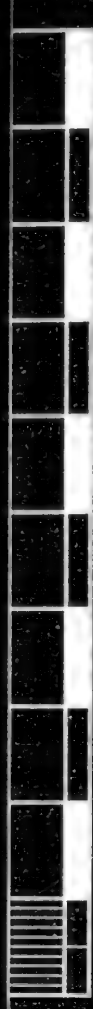


*Can. tichite, minor.*

180

Form elongate, tapering, sub-  
fusiform, tapering rather more from the sides  
of the anal and dorsal fins. Head very minute.  
Snout rather small, culmen sub-conic, thick-  
ant above, lower jaw long, strongly beak-edged,  
hooked, divergent in front. Vomer with  
contiguous, emarginate, of an elliptical sub-  
vertical impression lateral line elevated. Two  
spines before the dorsal, each provided  
with a filamentous membrane. 1st dorsal  
and anal, opposite, similar, very long, their  
anterior portion deeply notched, a small spine before  
the anal, composed of two spines, a small bandlet  
forked. Ventral subequal, broad to the belly  
by membrane, peduncle small.

NATURAL  
HISTORY  
MUSEUM



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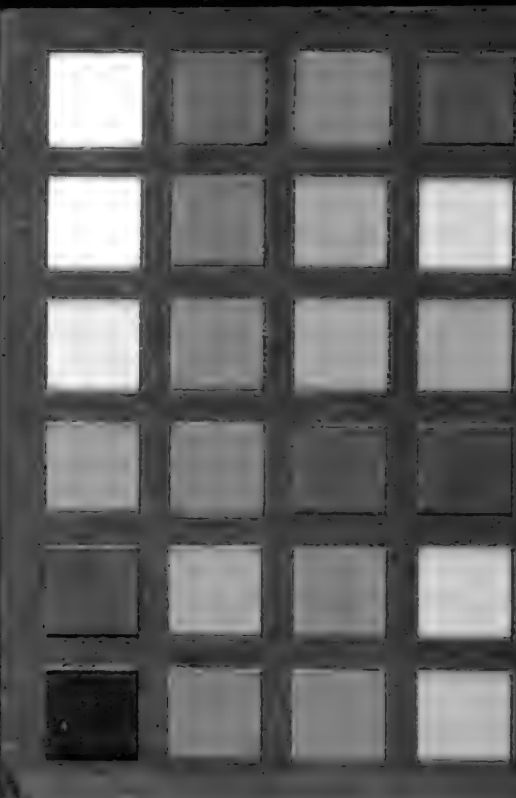
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*Charaxomus sancti petri*

*Lichen laboris, gamb.*

123

The first lateral spine is embedded in the interments and perpendicular in its position. The remaining ones, back are very small and lanceolate and can be folded back.





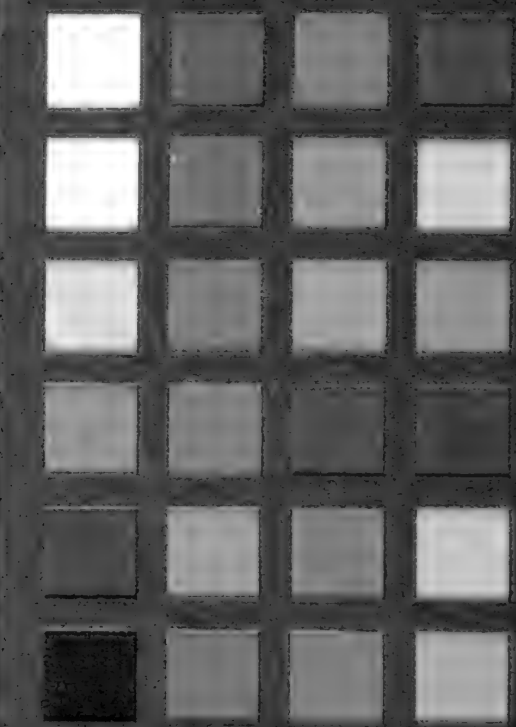
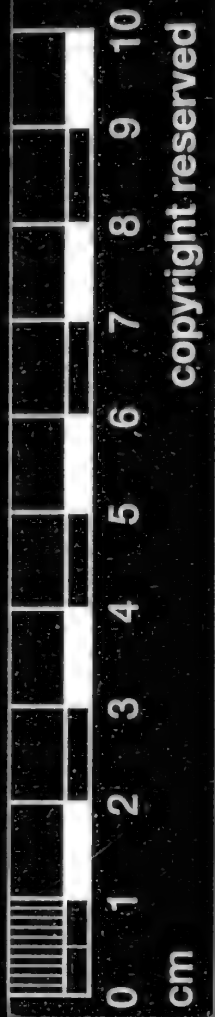
into white, curved, fine, slender, from the commencement of the soft dorsal to the end of the snout and then transverse backwards, but reaches the base of the caudal fin. Its length is about one-fourth the length of its base, which latter is twice as long as the head.

Color: The upper third is blackish, and grayish-silver beneath. Golden lines in the region of the sides, silvery-yellow dorsal spines, and the anterior portion of the soft dorsal fin, lateral streaks, ventral and anal whitish lines dusky, and spots on the sides, disposed in two horizontal rows. Length 12 inches.

Habitat: - Linné, 10. Brazil, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

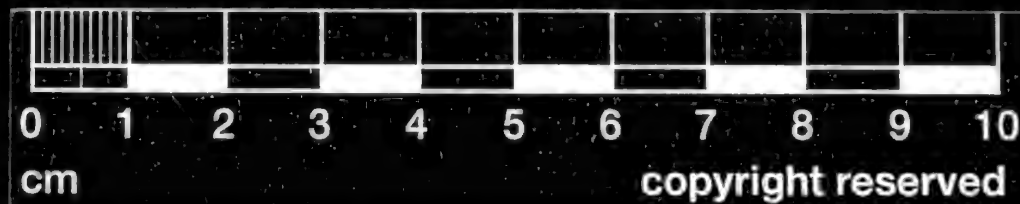
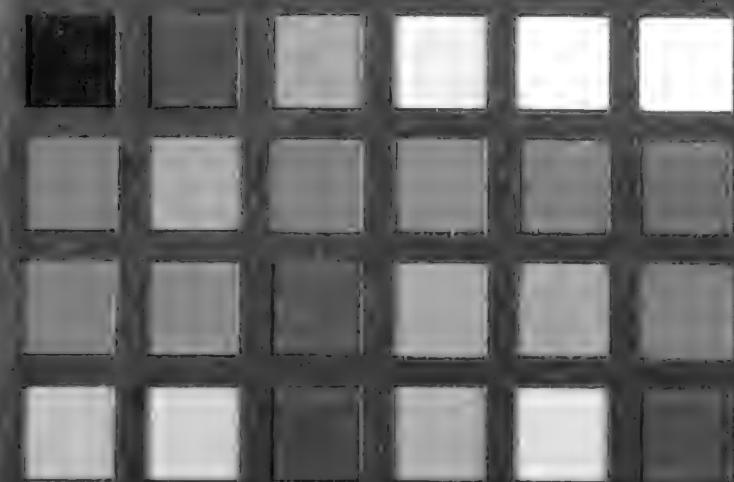
Remarks: - This beautiful species is not common, and may be determined to the lateral row of spots.

NATURAL  
HISTORY  
MUSEUM





*Chorinemus sancti-petri*





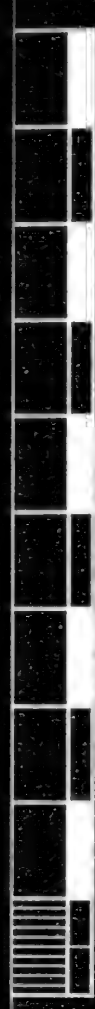
Trachinotus. niger.

190

Form oblong, sub-cylindrical, and slender, compressed. Scales minute, a patch of scales on the cheeks, and then more or less against the caudal fin. Lateral line arches over the pectorals. Head not convex. Teeth in villiform bands. Two spines before the dorsal and anal; each spine with bluish-silky membrane. Teeth fine anteriorly tapering into long points, posterior of which there are very few. Caudal with long points. Head but very small, inserted behind the pectorals. The pectorals rather small and sub-falciform.

This genus may be distinguished here from *Tichia*, even by their deeper bodies, more vertical profile and the dorsal and anal tapering into longer points.

NATURAL  
HISTORY  
MUSEUM



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cm

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bailonii

*Trachinotus quadrimaculatus*, Garrett.

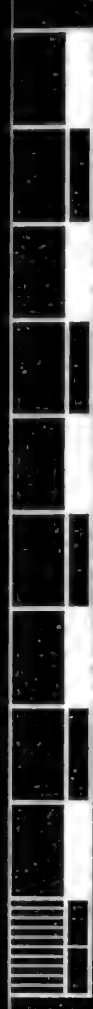
L. 8; D. 6-7; A. 4; P. 4-5; V. 1; C. 1; H. 1.

The upper and lower outlines are nearly similar. The greatest depth, which is at the origin of the soft dorsal equals about two-seventh of the entire length. The head comprises two-eleventh of the total length, a slight concave depression may be seen above the eyes. The hinder angle of the maxillary extends behind the anterior limb of the orbit. The eyes are rather large, horizontally oval, furnished behind and in front with a crescent-shaped veil; the length of the orbit enters four times in the length of the head and the posterior limb is just midway between the end of the snout and the hinder limb of the opercle. The two nasal orifices are near together, vertically oblong, and situated a little above the center of the eyes. The opercle with a prominent rounded border.

The six free gill rays in advance of the dorsal fin are very small. The anterior situated just midway between the soft dorsal fin and the middle termination of the opercle. The second dorsal grows over a base equal to one fourth the entire

NATURAL  
HISTORY  
MUSEUM

N

0 1 2 3 4 5 6 7 8 9 10  
cm

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length of the fish, and its pointed anterior portion in height equals the width of the head. The snout is long and has its anterior portion drawn out into a longer point than the posterior. The pectoral spines in front are very small. The very small ventrals are borne by membranes to the belly. The upper caudal fin is much larger than the lower one, being nearly one-third the entire length of the fish, the both taper to acute points.

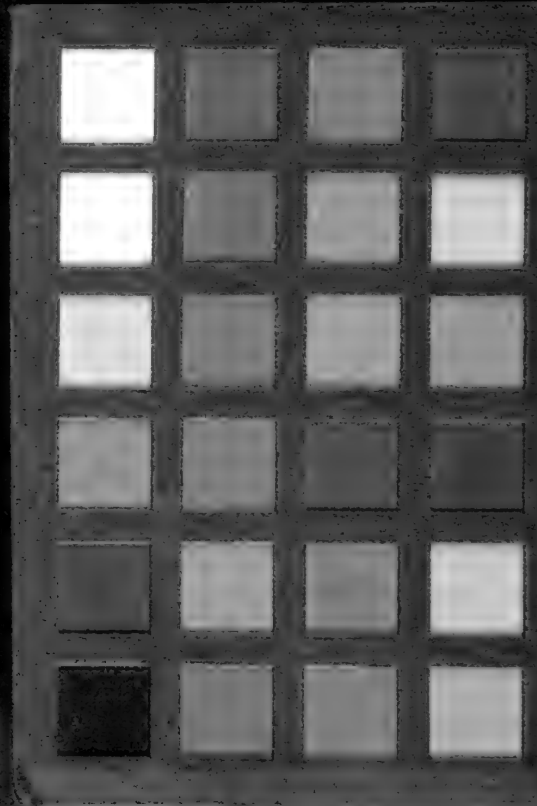
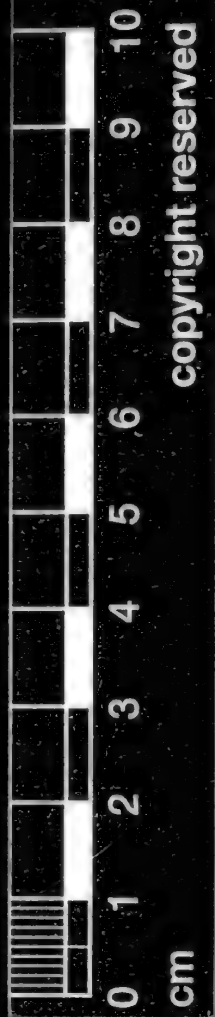
Color brilliant silver on the sides, and varnished steel line along the back, which in certain lights reflects light green. The upper portion of the head tin is olive, being the color of the ventral line. There are <sup>rather</sup> four large, smoky smoky blue-black spots. Basal half of the pectorals, the caudal, and the anterior portions of the dorsal and anal, blackish.

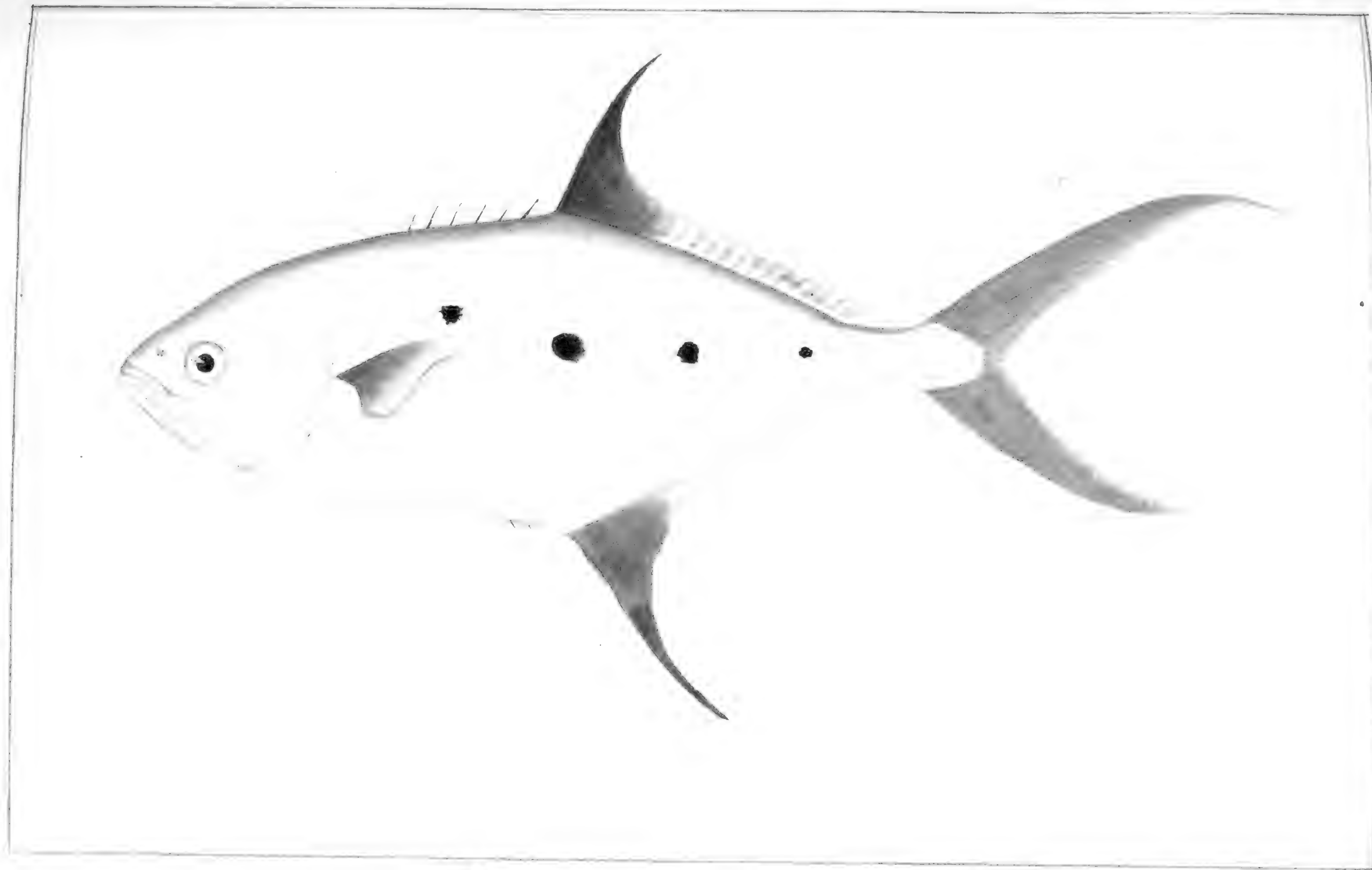
Length, 10 to 20 inches

Habitats: Brazil, etc.

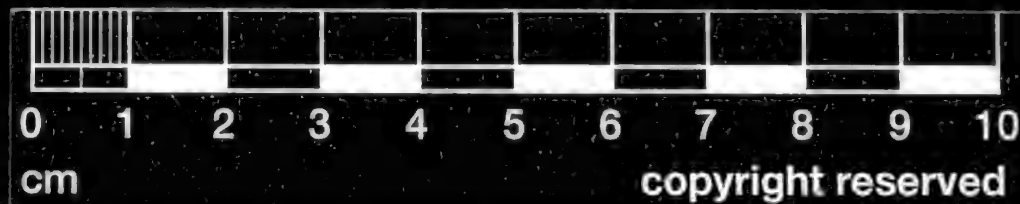
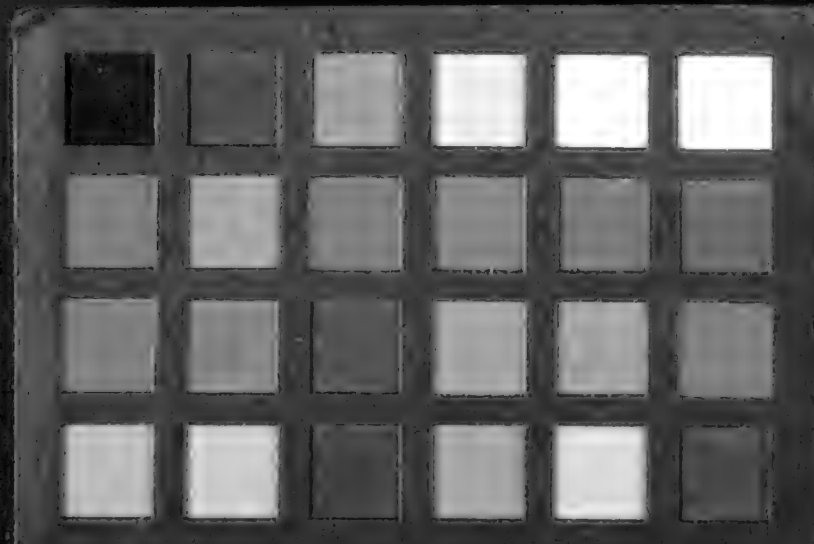
Remarks: It is named by the line which is called "achara nara". The four lateral spots along the side of the body are its most obvious characters.

NATURAL  
HISTORY  
MUSEUM





*Rachynotus bailloni*



NATURAL  
HISTORY  
MUSEUM



*Pectrus argenteus*  
Billus

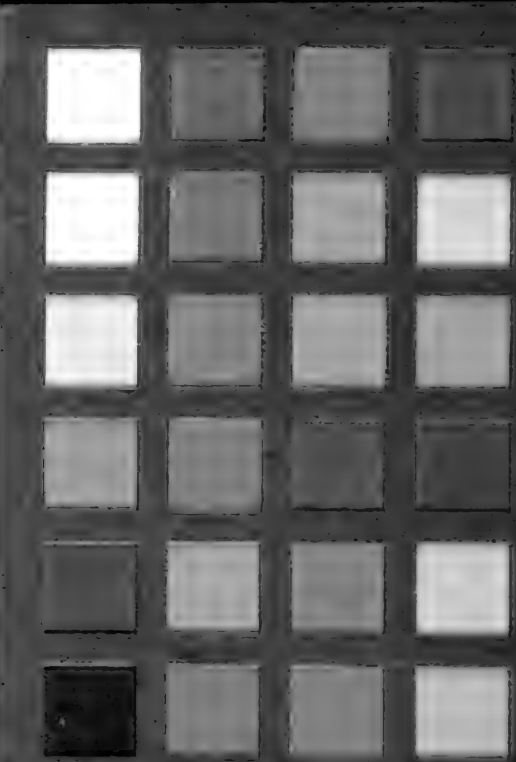
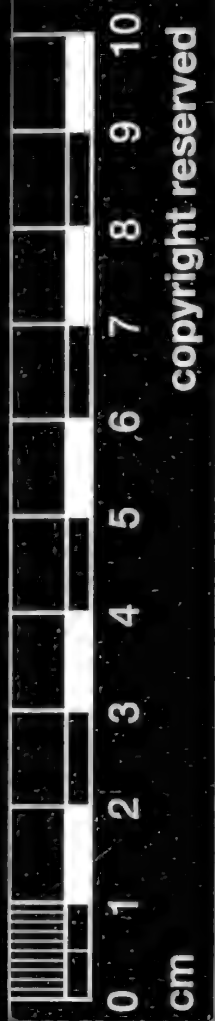
417

*Pectrus argenteus*, 1/2; the black stripes.

In general aspect of this species is not unusual, but the upper part is covered with fine, radiating lines. The head is covered with the same in most both dorsal and anal fins. The upper part of the body is strongly marked with black bands. The distance from the snout to the dorsal fin, the lower part of the body is the apex of the dorsal fin, the distance from the dorsal fin to the anal fin, the lateral line is marked. The greatest depth of the body and the distance from the side of the snout to the hinder termination of the dorsal fin are equal. The anal fin is a fourth of the total length of the fish, and the dorsal fin is nearly half the length of the body. The dorsal fin is nearly half the length of the body.

The height of the dorsal fin, which is equal to one-third the length of the fish, is equal to the length of the body. The dorsal fin is very long and is at right angles to the body. The anal fin is deeper and more pointed than the dorsal fin, and the anal fin is more pointed than the dorsal fin. The anal fin is more pointed than the dorsal fin.

NATURAL  
HISTORY  
MUSEUM



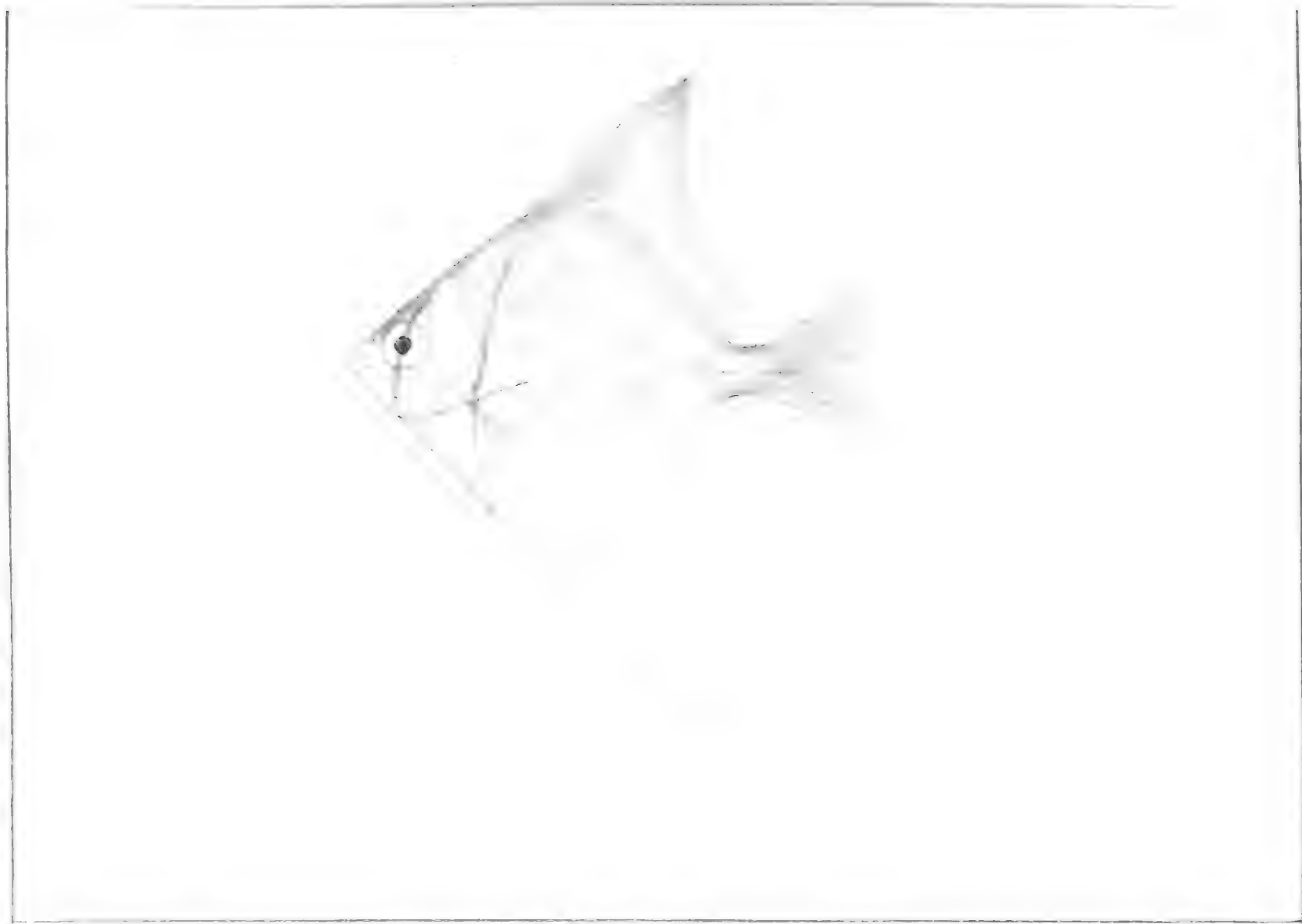
Color yellow. Head greenish slate  
above and beneath. With a similar  
but deeper colored line which curves  
upward and backward intersecting the  
eye. A pale but similar band extends  
from the origin of the dorsal to the  
ventral. Inducement. The dorsal fin  
is brown anteriorly, with yellow and together  
with the anal tipped with blackish. The  
caudal is pale or less yellow, and the  
pectoral colorless.

Length 3 inches.  
Habitance Iolo.  
Probably immature.  
Native name kaka.



NATURAL  
HISTORY  
MUSEUM

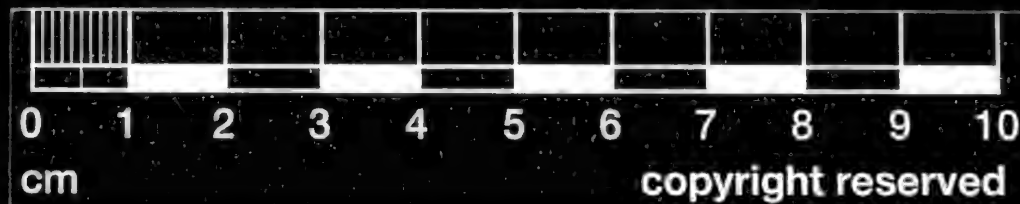
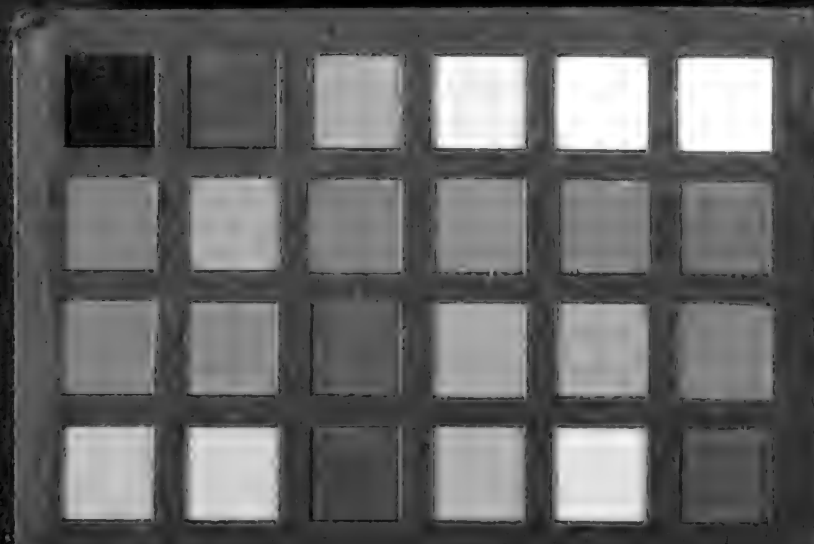




191

*Psectrogaster argenteus*

417



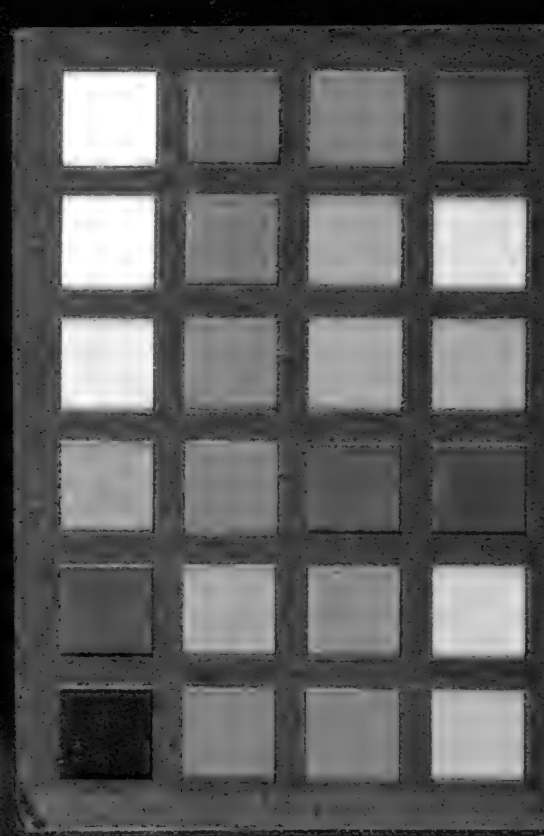
**N** NATURAL  
HISTORY  
MUSEUM

# *Stalax*

Form sub-terrestrial, more common in  
dead roots, but in some cases in  
living roots. It is a very common  
species with a long, slender, and  
an elongated body. The head is  
of moderate size, and the body is  
very slender. The legs are long and  
the antennae are very long. The  
color is a pale yellowish-brown.  
The body is very slender and the  
head is of moderate size. The legs  
are long and the antennae are very  
long. The color is a pale yellowish-  
brown. The body is very slender and  
the head is of moderate size. The  
legs are long and the antennae are  
very long. The color is a pale yellowish-  
brown.

*Stalax repens* Linn.

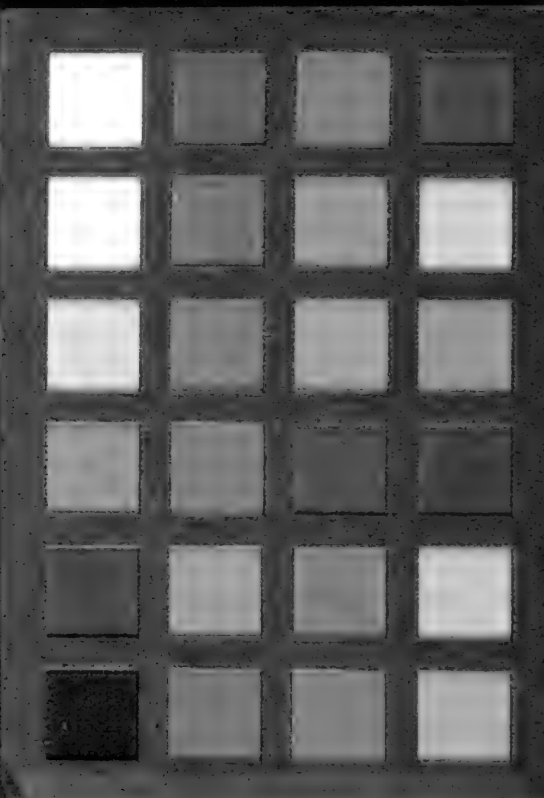
- Charbon* ...
- Charbon* ...
- Stalax* ...
- Stalax* ...
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5. 11. 1884. The ...  
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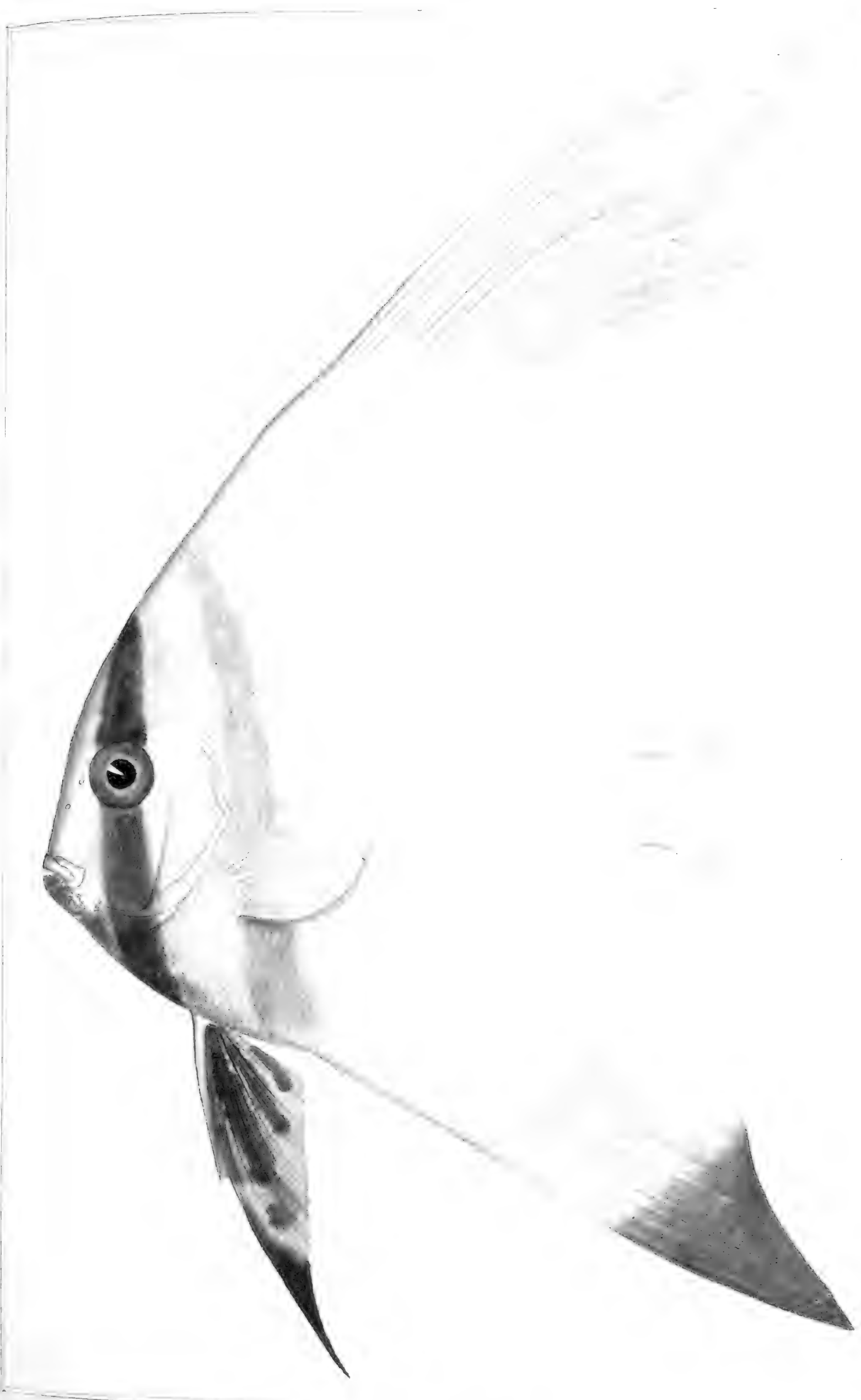
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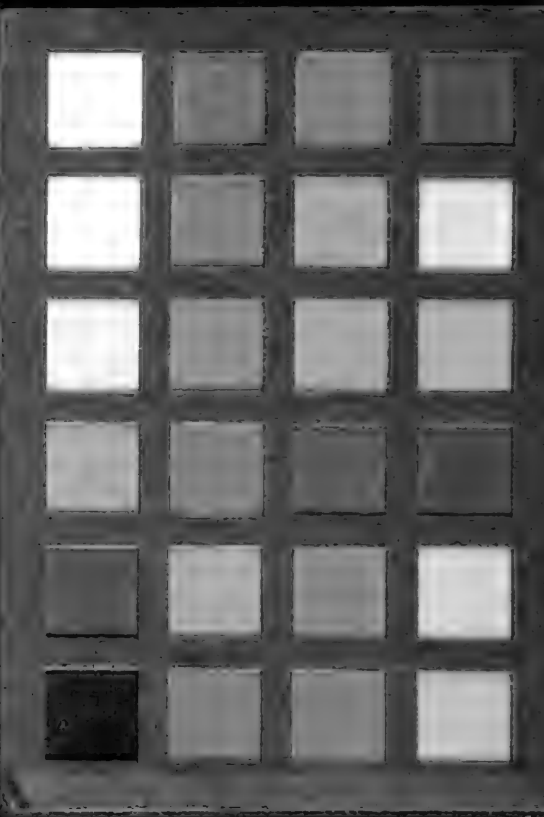
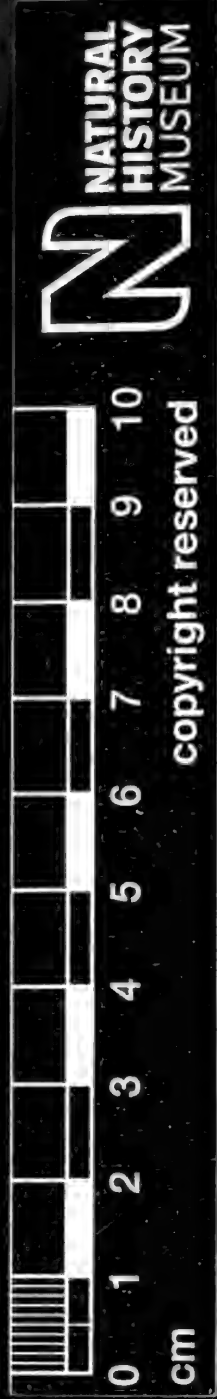




176  
102



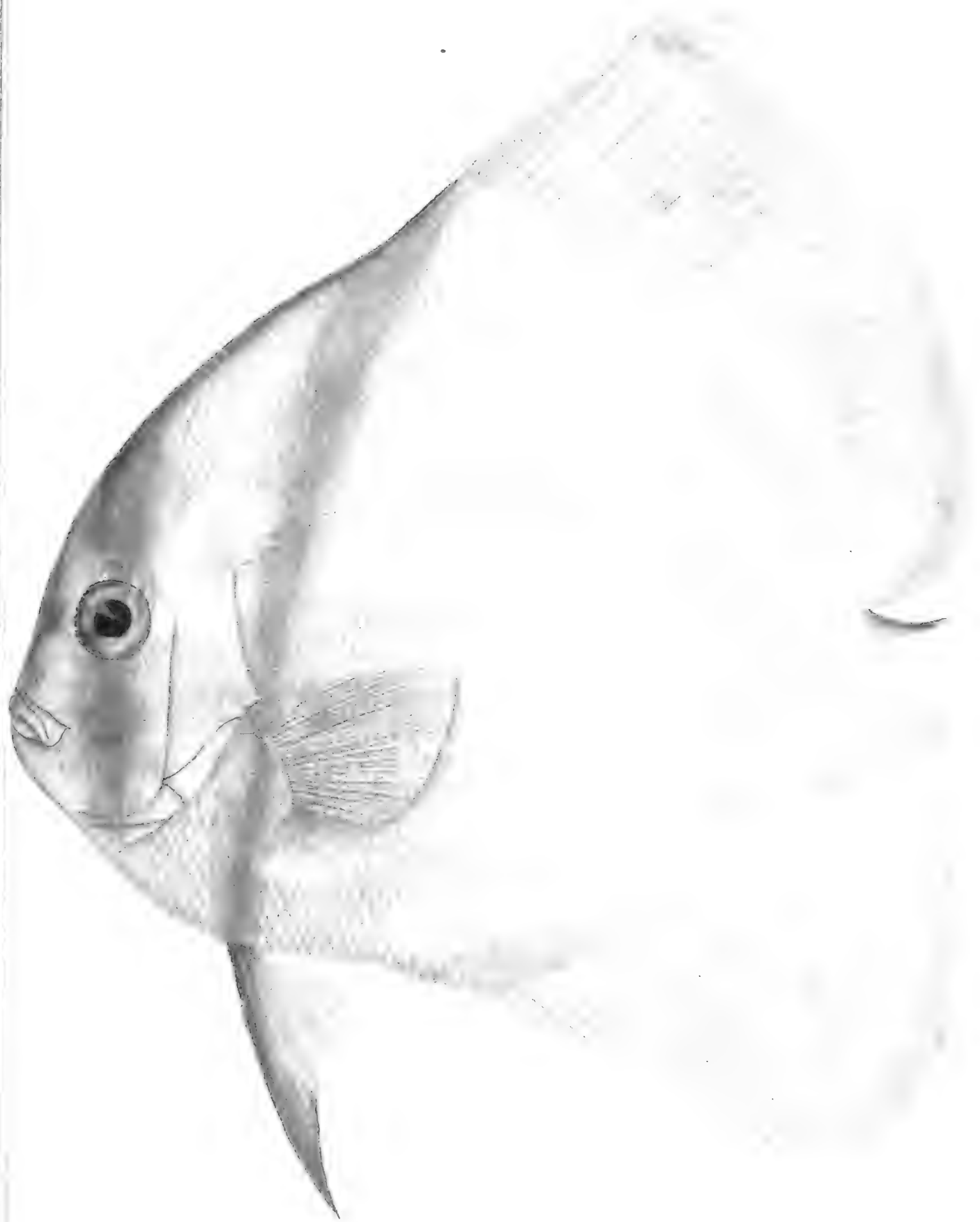
*Platax orbicularis*





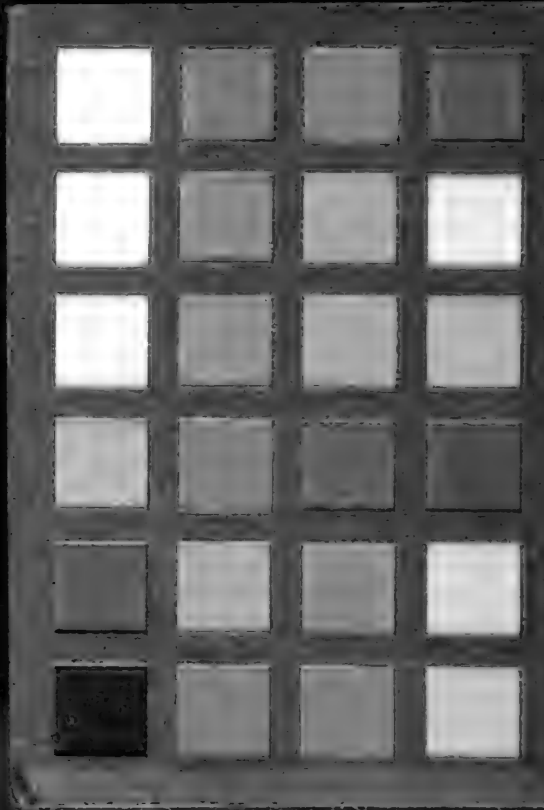






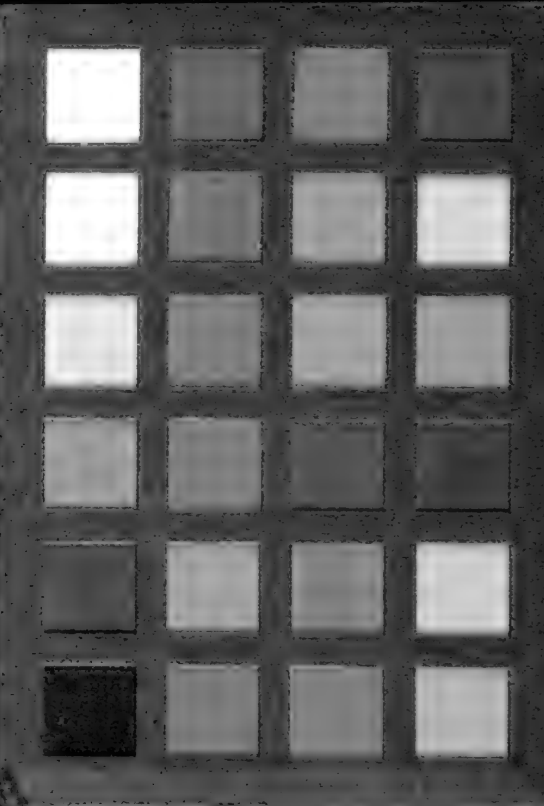
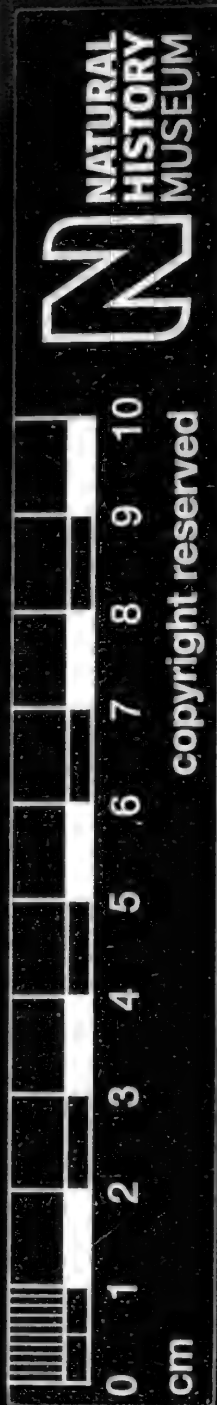
*Platax orbicularis*

NATURAL  
HISTORY  
MUSEUM







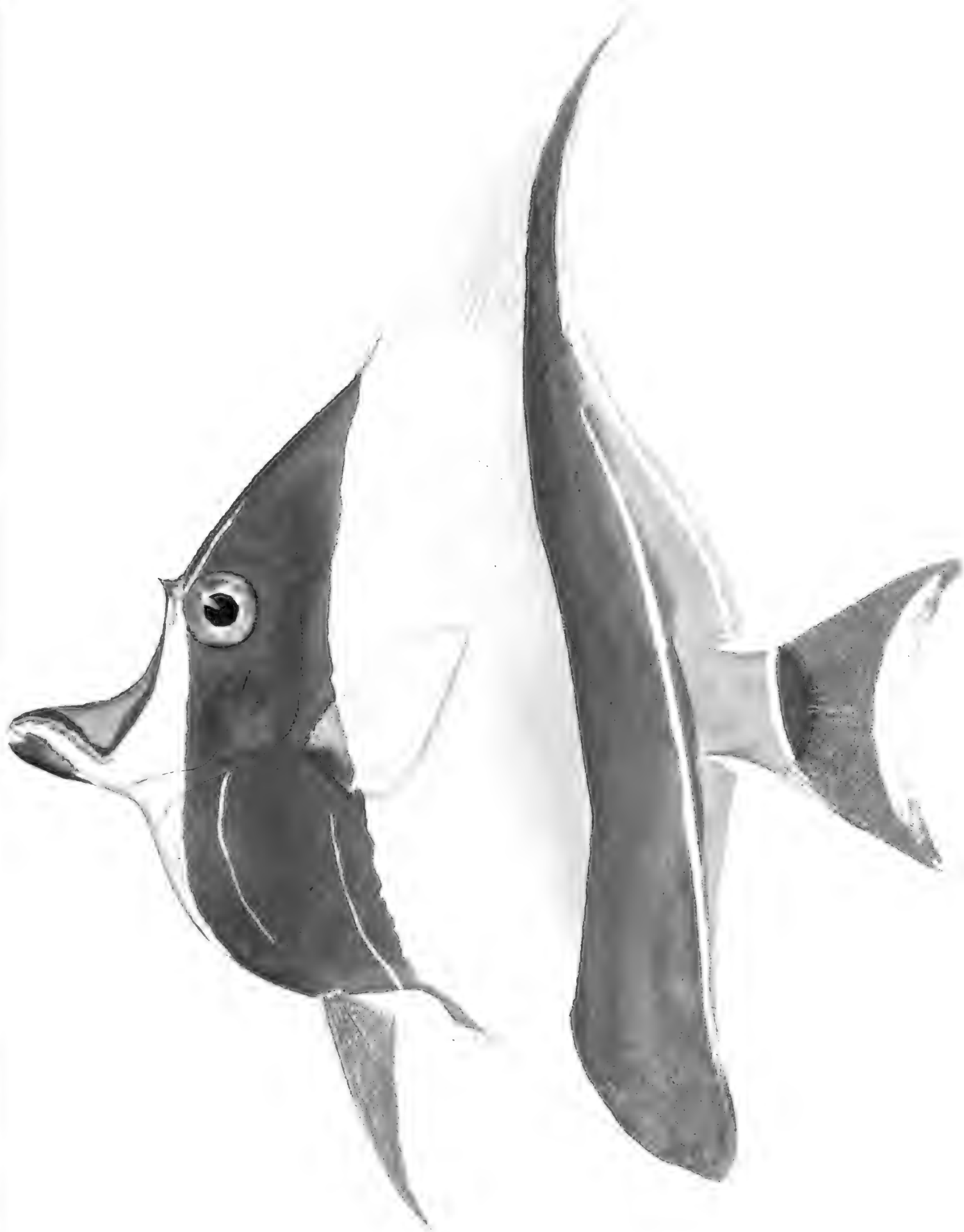




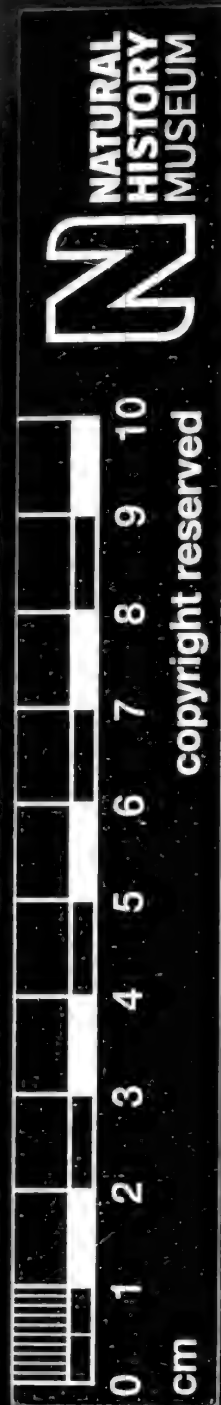
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There is a large number of  
specimens of the species at all the  
above mentioned localities. There is  
right in considering the species of  
Dumoulin, to be the same as the species of

175



*Zanclus cornutus*





*Macrurus palpatus*

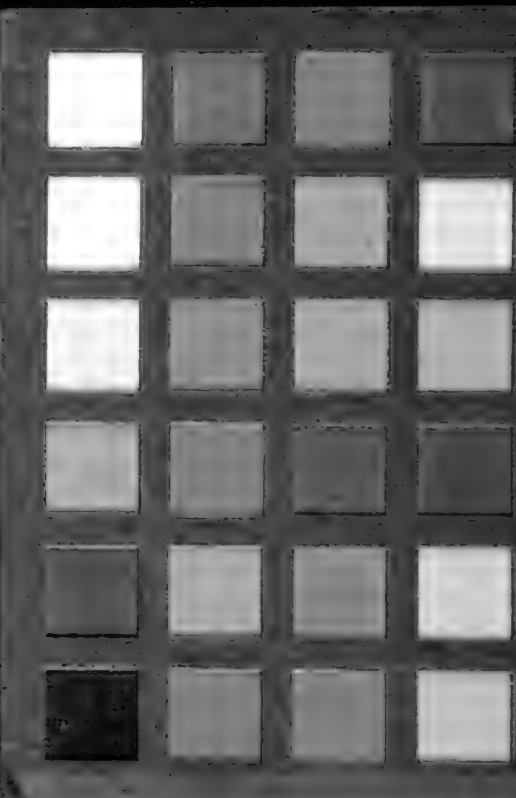
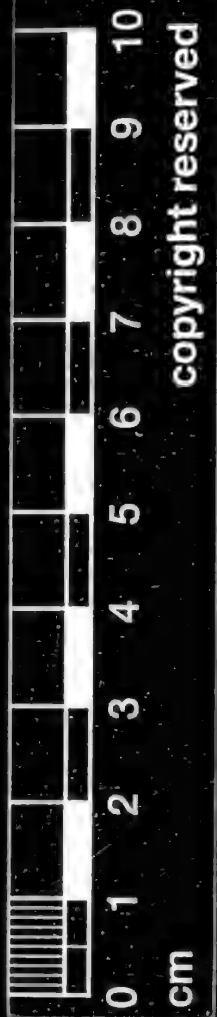
1887

Gen. char. Body oblong, compressed and covered with very small scales. Head large, rounded, covered with scutes. Two plates, lower one larger in front of the eye, which latter are large, thick, slender, approximating in front of the eye. The upper one oblique, and both jaws and preopercles armed with exiguous, unguiculate teeth closely-set teeth, disposed in bands. Opercular bones scabrous, the preopercle exhibits fine denticles. The lower jaw is prominent, the preopercle articulation continuous to the lower limit of the orbit, which is provided with a cartilaginous flap. The scales thick, set vertically, gills continuous. Branchiae eight. Lateral line not linear. Scales two, continuous, the anterior small, but much smaller than the second, and more posterior are rather fine. Ventrals beneath the base of the pectoral, subtruncal, without spines, rays black small, band of fin.

Specific char:

B. 8; D. 4/1; A. 13; V. 1; P. 1; S. 1.

The head compressed, smooth, the total length, which latter is equal to the greatest depth is as 4 to 1. Both the upper and lower outlines are more or less oval, the ventral arch being a trifle greater than the dorsal. The eye is horizontally oval, their length nearly equal.

NATURAL  
HISTORY  
MUSEUM

the head, and situated nearer the  
end of the snout than the opercular cor-  
ner. The hinder limit of the orbit is  
slightly anterior and the posterior tip  
of the maxillary extends a trifle behind  
a vertical center the center of the eye.  
The first dorsal commences imme-  
diately above the hinder limit of the  
opercular process and its base equal to  
half the length of the head. It is com-  
posed of four rays, the first nearly as  
long as the second which is the tallest  
and is longer than the length  
of the base; the third ray is about the  
same height as the first and the fourth  
is one-third shorter so the general shape  
of the fin is sub-triangular. The second  
ray is nearly as long as the head  
and rapidly tapers away posteriorly, so  
that the last ray is only half as tall  
as the anterior one, which latter is  
equal in height to three-fifths the  
length of the base. The ~~second dorsal~~  
anal is shape like the soft dorsal and  
is also nearly as long as the head. It  
commences opposite the posterior fourth  
of the soft dorsal, or just midway between  
the ventral and caudal, and is more  
oblong in its base than the fin above.  
The ventral is about half the length  
of the head, and the pectorals are tall  
and slender and inserted rather low in the  
breast. The caudal is deeply forked, the  
upper portion is nearly as long as the  
head.

Color bluish, or a deep black  
from the second anal canal mar-

0 1 2 3 4 5 6 7 8 9 10  
cm  
copyright reserved

NATURAL  
HISTORY  
MUSEUM

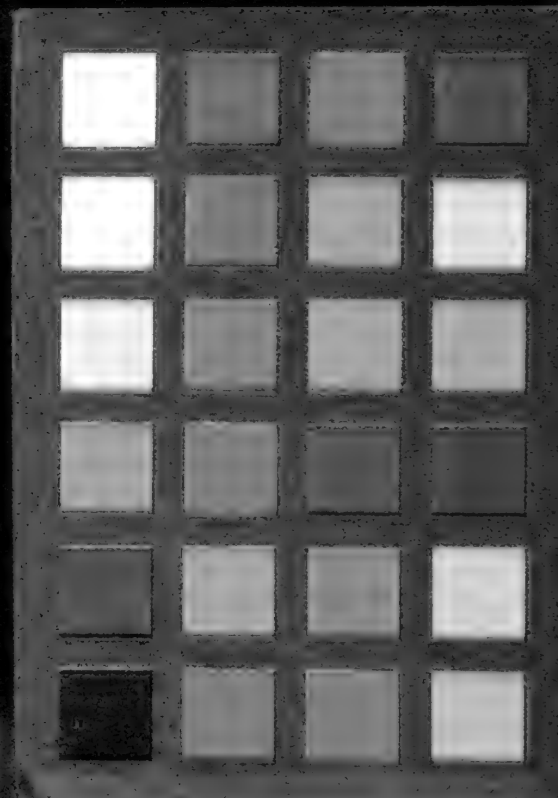
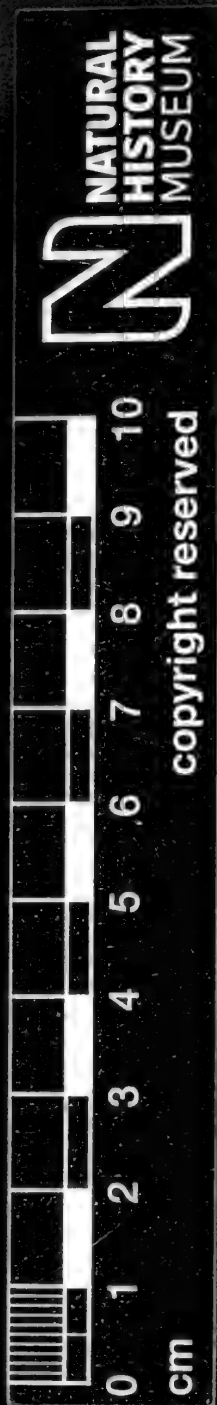


lined with white and the former  
with a horizontally, oblique tapering  
colorless band.

Length  $1\frac{1}{4}$  inches

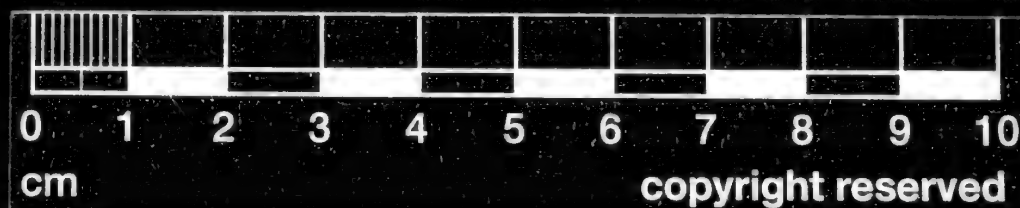
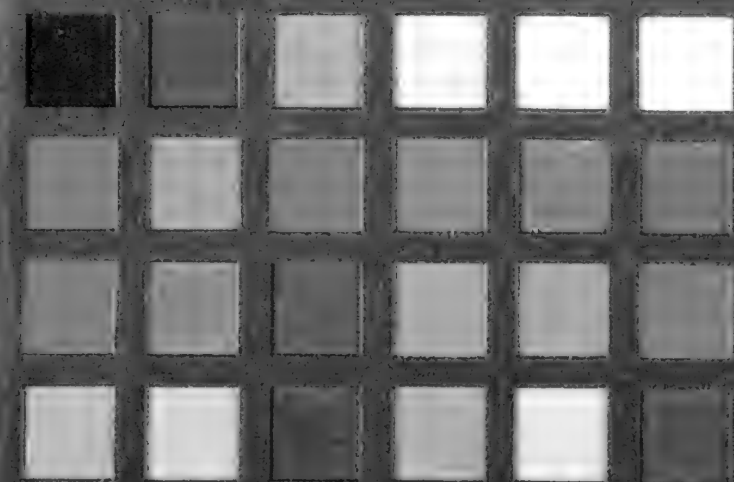
Shade. Pan. in. in. Bl.

A very rare fish of which we have  
seen but one more.



*Anomalops palpebratus*

317  
135



**N** NATURAL  
HISTORY  
MUSEUM





and the anterior point of the maxillae  
extend to a vertical touching the  
anterior end of the orbit. The large  
preopercle is running off in its corner.  
The lateral line is gently arched,  
and consists of oblong elevated horizon-  
tal continuous tubercles.

The dorsal fin commences  
a little posterior to the base of the  
pectoral, and passes over a base equal  
to  $\frac{1}{2}$  the length of the head. The first  
ray is drawn out into a long filament  
equal to the length of the whole fin.  
The second dorsal ray is less than one  
third as long as the first and the  
others rapidly diminish in height  
to the last which is a little shorter  
than the immediately preceding ray, which  
gives the spring portion a triangular  
aspect. The soft portion of the dorsal  
occupies more than two thirds of the  
length of the ~~first~~ fin and is of nearly  
the same depth throughout its course,  
and its margin is convergent with  
the slightly arched back. The anal  
fin starts from a point which is  
a little nearer the base of the caudal  
than the end of the snout, and extends  
over a base equal to one-third the  
total length of the fish. Its anterior  
spring ray is minute, the second  
ray being, equalling nearly half  
the length of the base of the fin;  
the third spine is half as long  
as the second, the fourth still shorter,  
and the soft portion is similar to  
the fin above. The ventrals are sub-



NATURAL  
HISTORY  
MUSEUM



truncate, and nearly half as long as the head. The pectorals are much longer than the ventrals. The posterior margin is convex. The caudal is proportionally smaller than the lobes a little longer than the head, pointed broad base.

Color dull, and silvery. A horizontal row of 11 or 12 oblong yellowish spots extend from the origin of the lateral fin to the end of the dorsal fin. The top of the head is bluish-streaked. Sides otherwise colorless except a marginal band of yellowish on the dorsal and anal fins. The caudal fin is tipped with yellow and shaded off posteriorly with black.

Length to 10 cm.

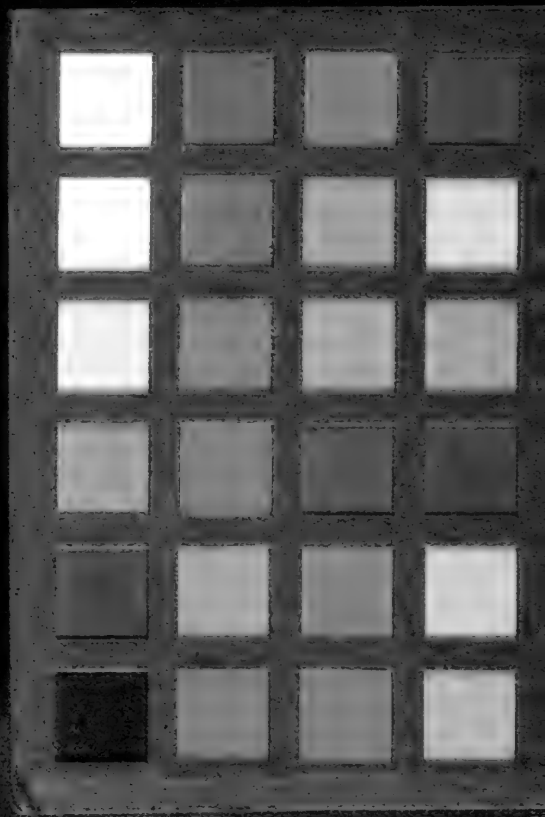
Hab. - Japan, etc.

NATURAL  
HISTORY  
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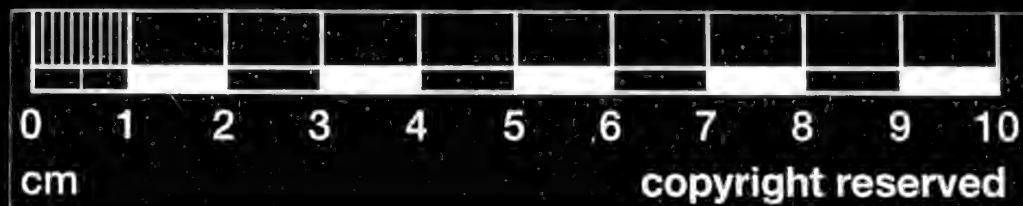
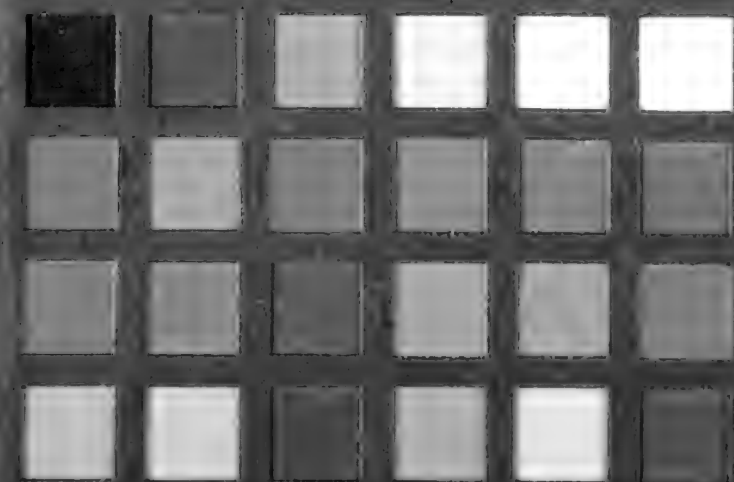
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*Egymna fasciata*

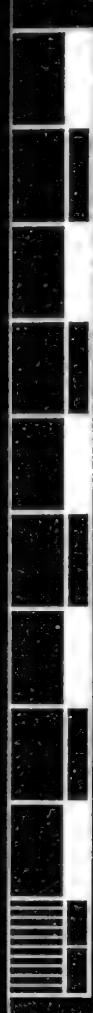




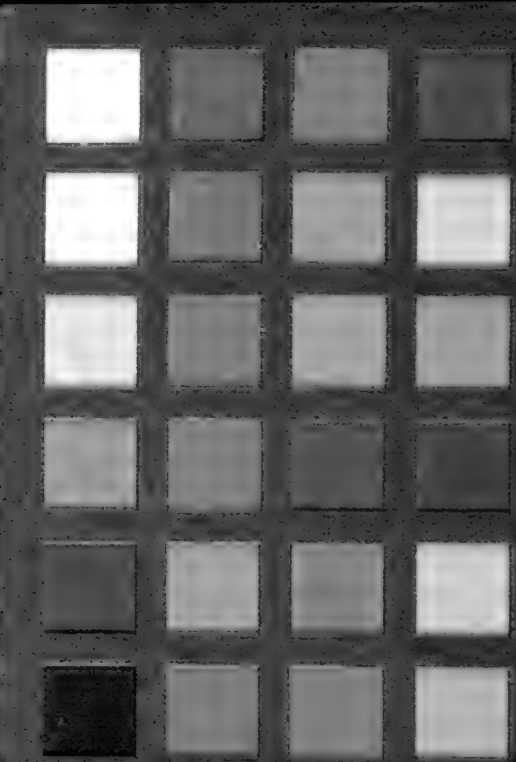
*Amphioxus (Amphioxus) ampullatus*

Form elongate, slender, compressed.  
Head exserted, bearing a small, rounded,  
blunt, notched, elevated, and slightly con-  
vex tubercle, lying in a moderate position.  
Snout oblique; small acute snout teeth in  
both jaws, and in vomer. A single row of  
single rows of teeth in the pharynx. A anal  
fin extends along the whole of the back,  
and its <sup>anal</sup> ~~anal~~ position is complete. A simple  
flexible ray, not long, dorsal, slender,  
and terminates in the anal fin, forming  
of the dorsal fin, but in some beneath  
the pectorals, the lateral pectorals are  
bifurcate.

NATURAL  
HISTORY  
MUSEUM

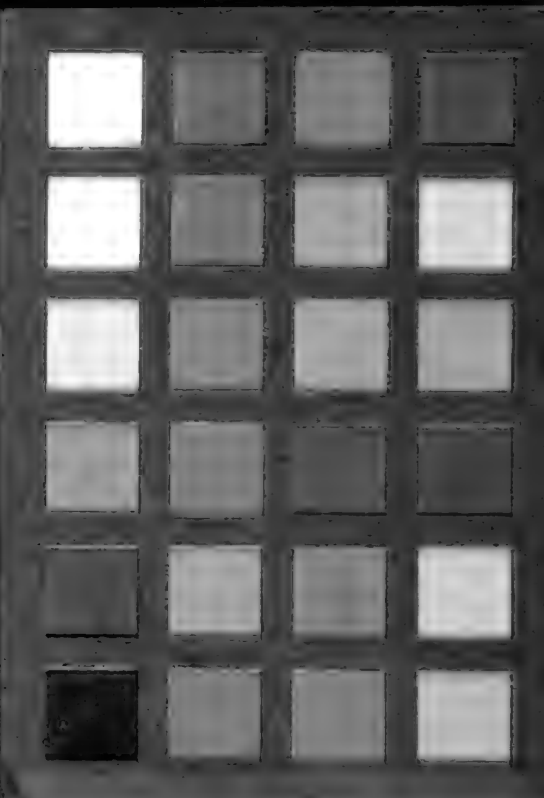


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*Curonemus punctatus*, Smith.

Length 1.5 mm. Head 0.5 mm. Body 1.0 mm.  
The head is oval, with a small, rounded, pointed process at the front. The eyes are small, round, and situated near the front. The antennae are short, thick, and cylindrical. The body is elongated, with a slightly curved, tapering shape. The surface is smooth, with a few small, dark spots. The legs are short, thick, and cylindrical. The tail is small, rounded, and pointed. The color is a light brown or tan.

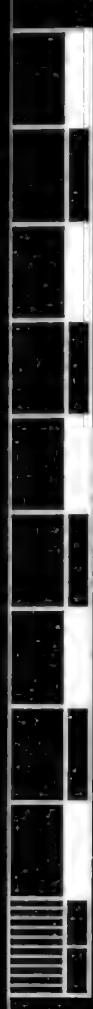




The dorsal fin commences at a point midway between the eye and the anterior margin of the opercle, and extends quite close to the caudal, leaving a narrow space between the two, nearly the length of the eye. The anterior rays of the pectorals increase in length, the first being very small, and it reaches its greatest extent at the fifteenth or sixteenth ray. The anterior half is gently arched in outline, and its articulated portion together with the anal on a slight curve. The latter is a little over a point opposite to the third third ray, in the dorsal fin. The dorsal fin is ten to twelve times the length of the snout, and is higher than half the length of the snout. The small pectorals are a little shorter than the ventrals. The caudal fin is narrow, tapering to point, and its length equal one-fifth of the total length of the fish.

Coloration. The dorsal region light blue; sides brilliant silver, in a line to the pectoral region yellow, a few small black dots scattered over the side of head and body. Ventrals deep blue. The pectorals bright yellow above. Caudal blue to silver. Shading off with fine yellow. Anal rays yellow. Pectorals white, longer with yellow. Ventrals white.

NATURAL  
HISTORY  
MUSEUM



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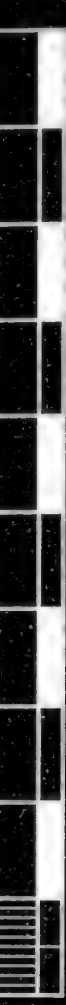
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Length, 14 to 16 inches.

Habitat. Pacific Ocean.

Remarks. The elegant species is pelagic in its habits, and is known among seamen by the vulgar name of "yellow tail". One specimen was caught with hook and line while making a passage from Suva to the Goodenough Islands.

NATURAL  
HISTORY  
MUSEUM

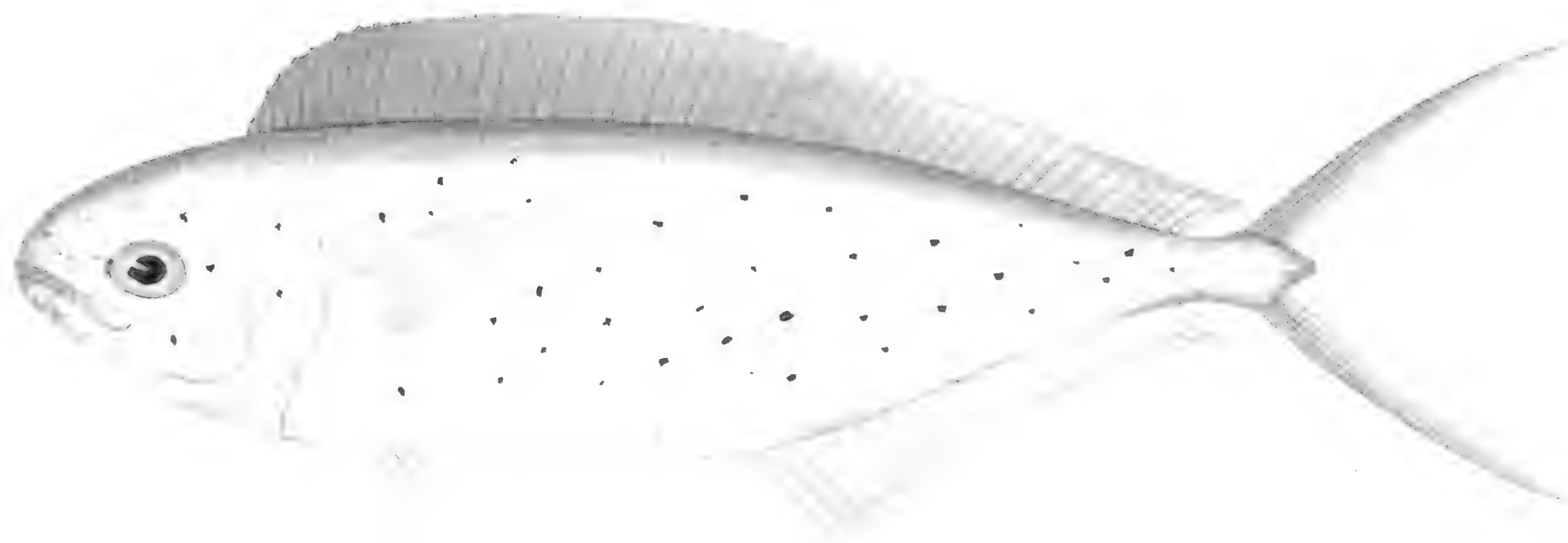


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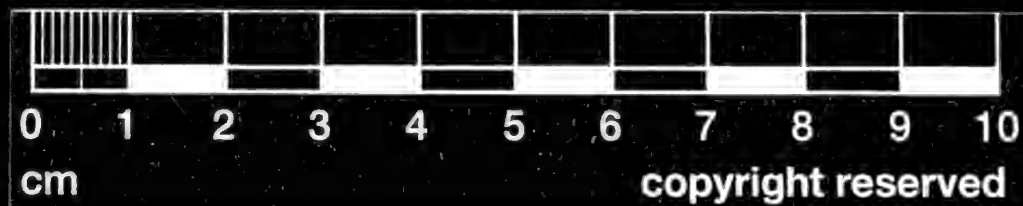
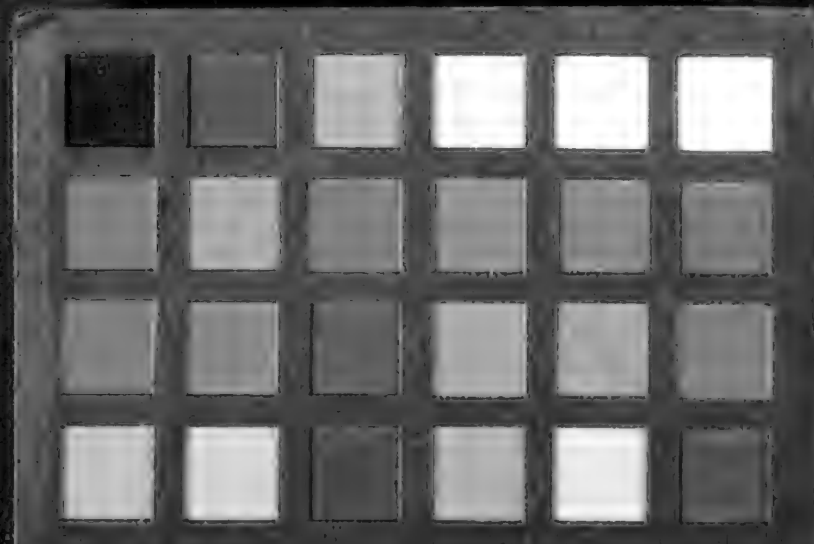
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*Coryphæna equisetis*



*Thynnus, lineatus*

Firm, elongate, fusiform, compressed, caudal  
minute, smooth, brown, greenish, black, blue  
and silver. Lateral line black, an  
enlarged, horizontal caudal fin, and a  
the tail, which terminates in a small  
the little oblique caudal fin, pointed, low  
even; both in a single row, small and pointed.  
Dorsal oblique, thin, small. The two  
approximating. The pectoral fin is  
on its anterior portion, and the soft  
with the anal fin is more or less  
forming, little but triangular, pointed. The  
similar, but more pointed than the soft  
anal. Caudal narrow, crescent-shaped.

*Thynnus clava, garretti*

(L.B.) 1855-12-53. L. 12.5. H. 1.5. W. 1.5. D. 1.5.  
The upper and lower portions are  
separated by a black line. The  
snout to the tail. The caudal depth is  
nearly one-fourth of the total length,  
and the greatest thickness is more than  
<sup>half</sup> the above mentioned depth. The head can  
stick out a little more than a fourth of the length.

NATURAL  
HISTORY  
MUSEUM

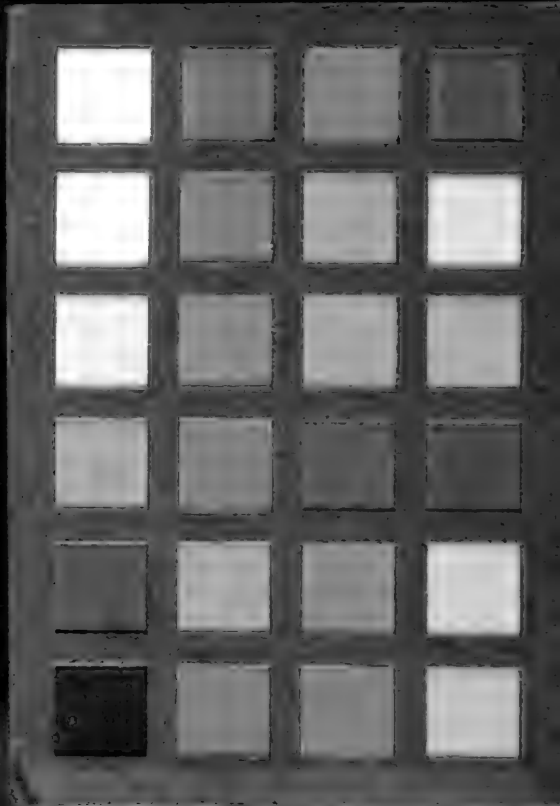
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December 1888

6.5; I was of the first light type. This species is very common, and the most typical of the birds which inhabit the lowlands of Japan. The upper and lower mandibles are similar in their construction, and the culmen is a gentle descent in its curve to the tip, and is somewhat graduated. The gape is very small. The head is a strong, compact, nearly a fourth of the length of the eye, sub-circular in shape, and is directed forward a fourth of the length of the head. The nostrils are about midway between the end of the snout and the orbit, the openings are remote, the nostrils are small, sub-ovate, and the position is a little lower. The hinder tip of the mandible extends backward a little posterior to the center of the eye. The preopercle is large, triangular, strongly notched on the outer edge, lower jaw a triple. The long canals both with a single row of minute teeth. The margin of the gill opening is entire. The little external nares are at the end of the first dorsal fin.

The first dorsal fin is at a point which is a little more than the second fin. The anal fin is at the orbit. The base slightly exceeds the height, and the second dorsal fin is the tallest is about as long as the first. The first is a little more than half the length of the second. The rapid decrease in size of the posterior fins so that the last is only a small



dorsal fin. The soft dorsal commences  
near the midlength between the origin of the  
dorsal fin and the base of the caudal.  
The first dorsal fin is the length of  
the body before rapidly posteriorly,  
and is nearly twice as long. The space be-  
tween the second and third dorsal is  
occupied by five small finlets. The ventrals  
are situated beneath the origin of the first  
dorsal and their length equals the soft  
dorsal fin. The anal is similar to the  
first dorsal but is a little more  
posterior. The pelvic fins are slightly  
curved in their anterior margin place  
rather high up and in length equal to the  
height of the first dorsal. The caudal is  
deep, forked, the lobes pointed, lanceolate.  
Color brilliant silvery on the  
flanks, about base of fins and strong white  
beneath. The upper third is certain  
light green with the upper green line marked  
by thin irregular longitudinal lines of  
a coppery tint which are only seen  
distinctly in certain lights. The same  
may be seen of two rows of blue-black  
dorsal spots under silvery. All the  
faintly colored, except a light  
brassy tinge on the dorsal and caudal.  
Length 11 inches.

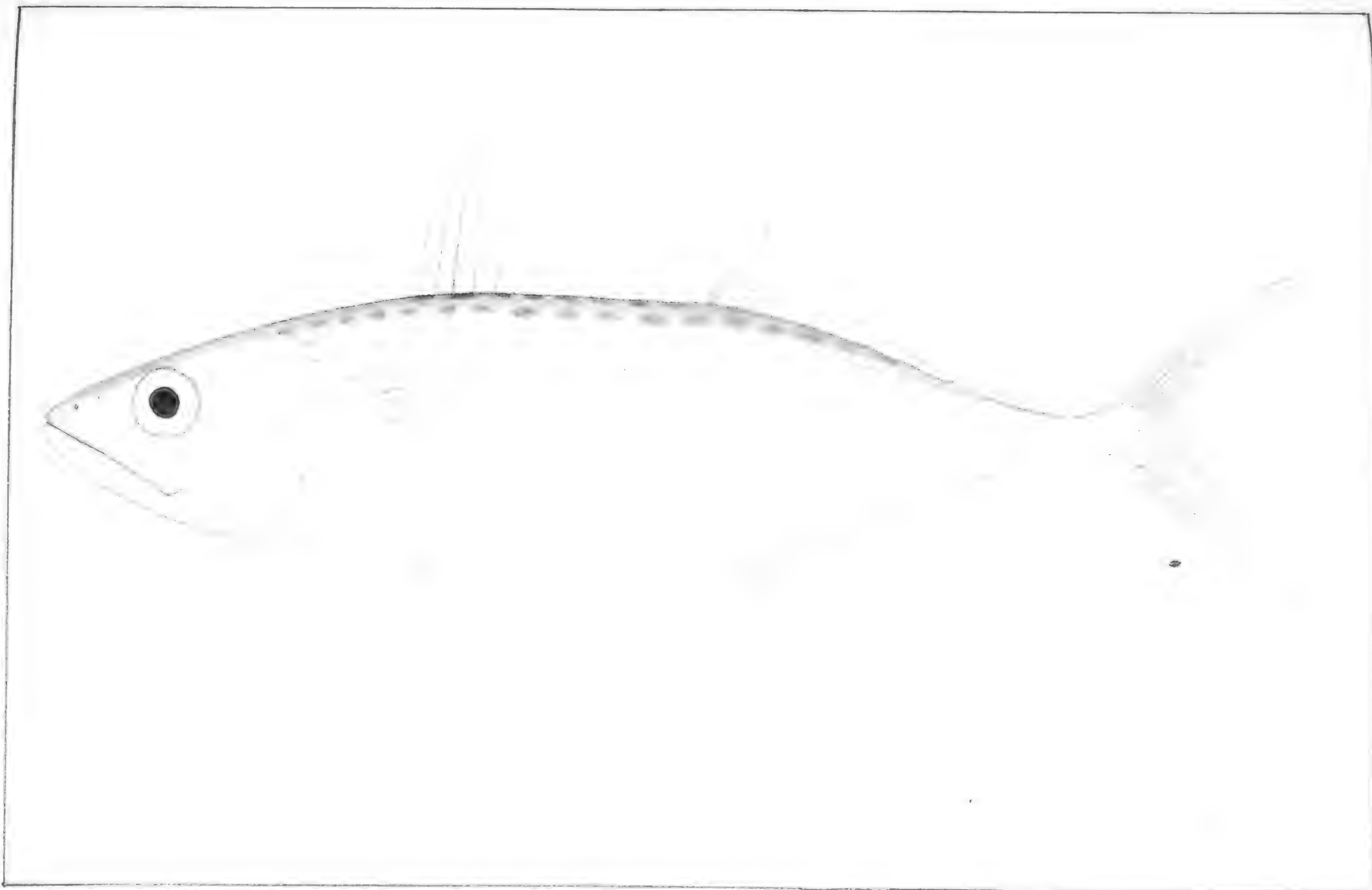
*Heliophis*

*reticulatus* "Lata"

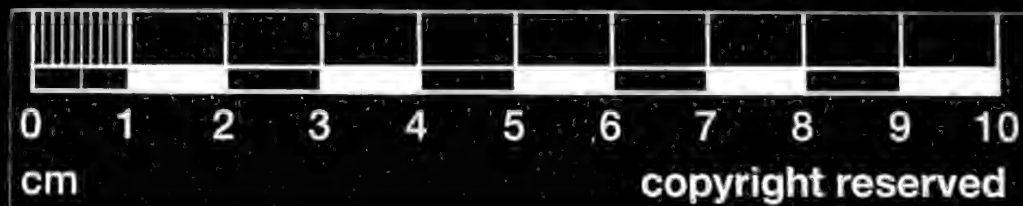
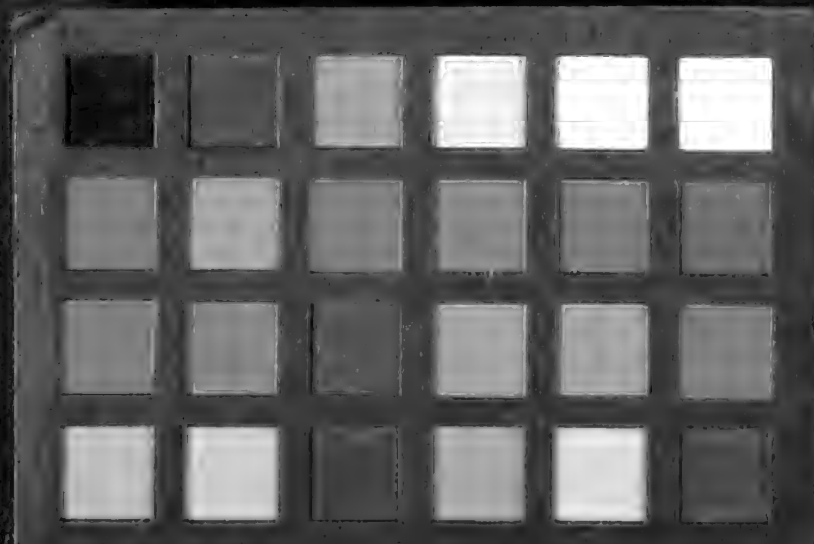


NATURAL  
HISTORY  
MUSEUM



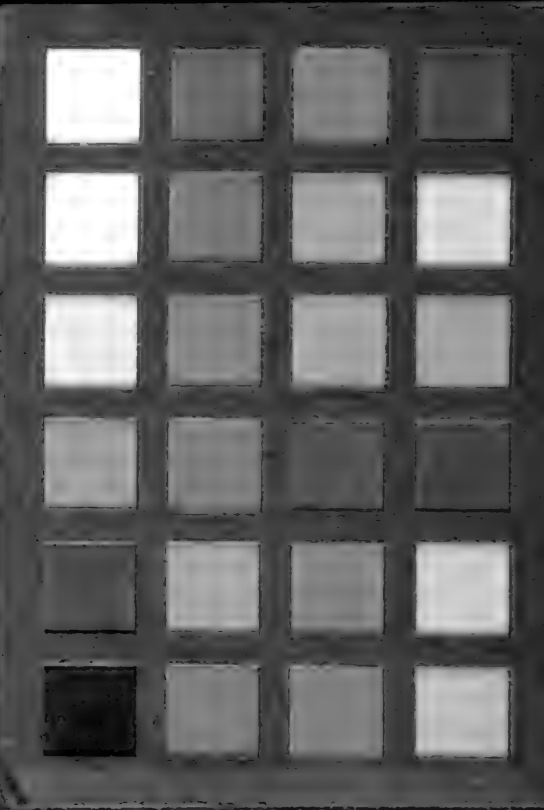


*Scomber kanagurta*



The rather small, and slightly oval,  
 their great common measure, is now  
 in the length of the head, and once and a  
 half is a measure of their own body. The  
 notulae are vertical, linear, and the antennae  
 are which is the smallest is nearly midway  
 between the eye and the tip of the snout.  
 The hinder tip of the maxillary reaches  
 a vertical line passing through the center  
 of the eye, particular piece rounded.  
 The time appears from the origin of the  
 dorsal fin, at the pectoral base and the  
 ventral fin in the ventral, it is a measure of  
 base equal to the length of the head.  
 The anterior portion is small, equal. The  
 distance of one the eye to the hinder  
 margin of the operculum is a measure of part  
 is very low and small, and the depth  
 dorsal is equal to the length of the operculum to  
 a free space is less than the length of  
 the eye is extent, it is small, oblique,  
 deeply concave above, and it is a measure  
 length of base about equal, and is a measure  
 half the altitude of the operculum. The  
 finlets are eight above and eight below.  
 The anal fin commences opposite to the  
 hinder termination of the dorsal fin, the  
 small ventral are the first dorsal fin  
 pectoral are a measure of their own

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 HISTORY  
 MUSEUM





margins. The pectorals are also small, sub-petiform, their tips reaching as far back as the tenth spine of the first dorsal fin.

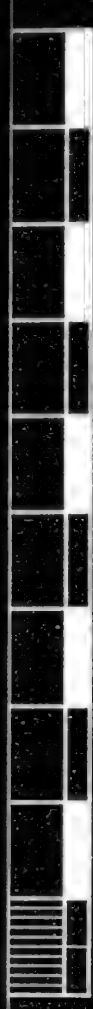
Later along, the dorsal is iron blue-black, a portion extending into the snout. A faint reddish suffusion along the upper posterior half of the body is marked with numerous, obscure, nodular black diffuse spots and spots. Several reddish dusky spot between the ventral and pectorals. Sides iron white. Spines, dorsal with a small tooth, soft dorsal and anal dusky, steel, snout silvery, ventral white with their inner margins dusky. The pectorals are silver, bordered with blue black along their inner margins, and blue-black on their inner surfaces.

Length, 14 inches.

Habitat, Society, etc.

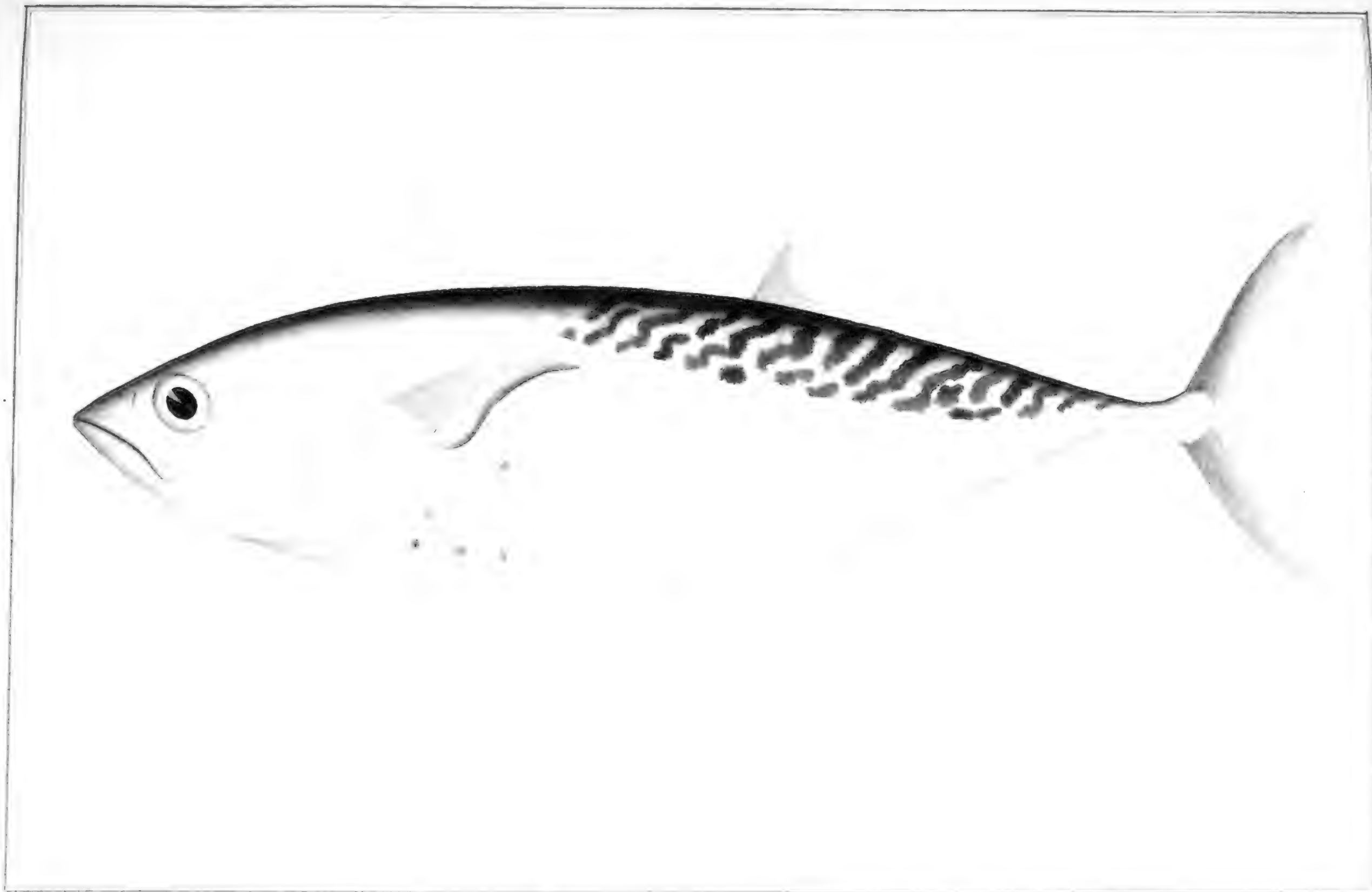
Remarks. A single specimen of this graceful fish was procured in the month of January. Its vernacular name is "otava".

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HISTORY  
MUSEUM

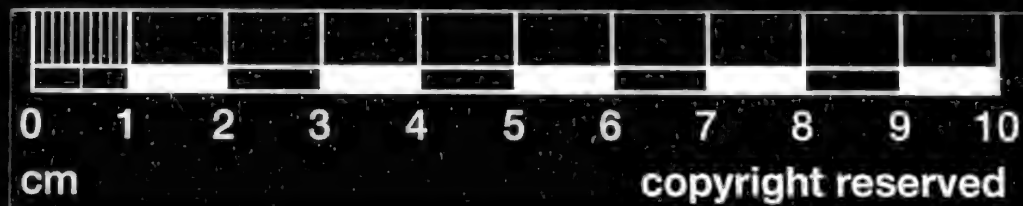
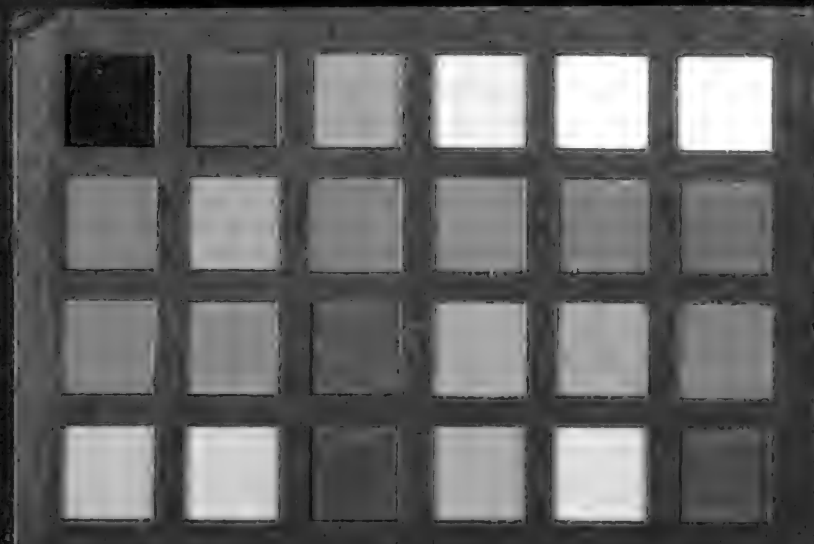


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*Thynnus thynnus*



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*Syngnathus pelamys*

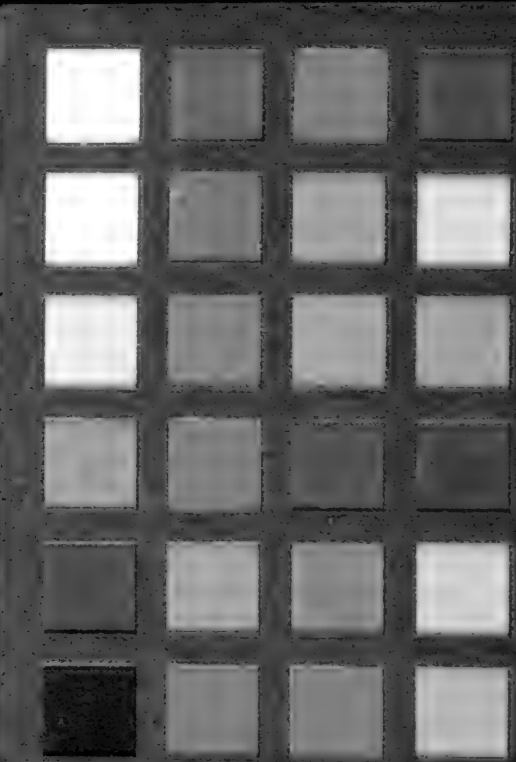
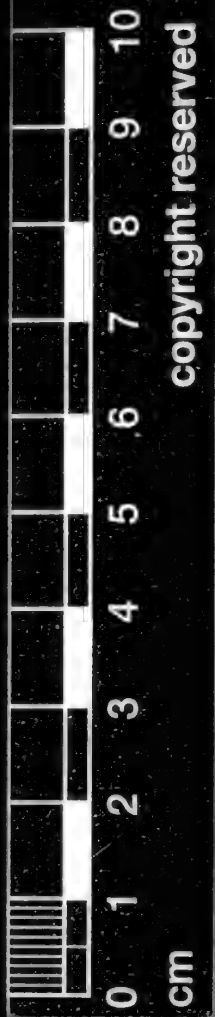
7. 15-21 + 1; 12-14 + 1; 11-13; 12-14; 6-8; 4-5; 7, 1, 10

The upper and lower outlines are somewhat arching, both commencing at the end of the snout and terminating at the tail. The greatest depth of the body is four times in the total length, caudal fork excluded. The head which comprises a little more than a fourth of the fish, is prominent, and the rather large eye, is about equal to the length of the head. The hinder tip of the maxillary reaches as far back as the centre of the eye.

For shape and proportion of the fins, color, and color see plate, which is very correct.

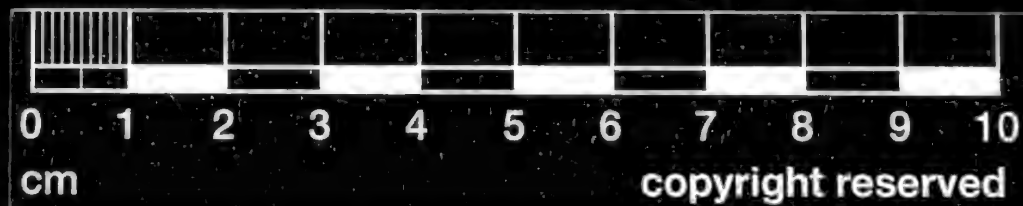
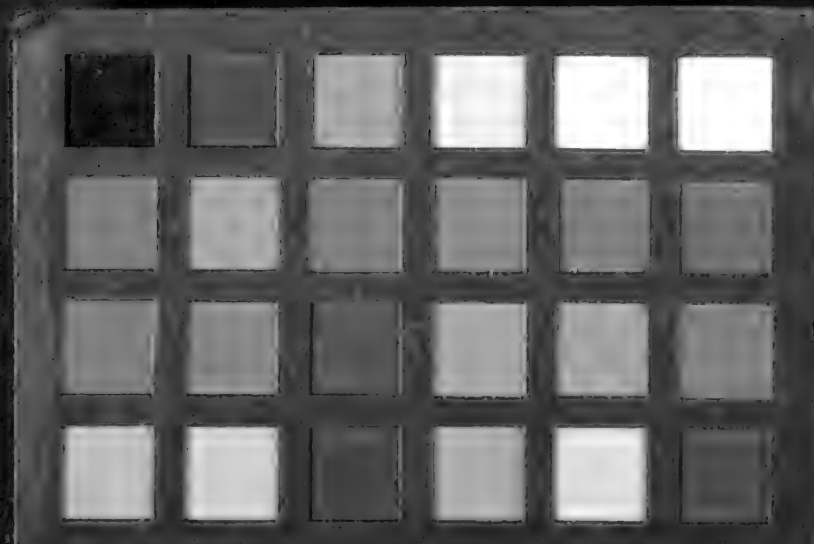
A well known pelagic species.  
It is the Scorpaenidae, F. S. Bennett.  
"Whaling Boats, Vol. 2, p. 100."

NATURAL  
HISTORY  
MUSEUM





*Thynnus pelamys*

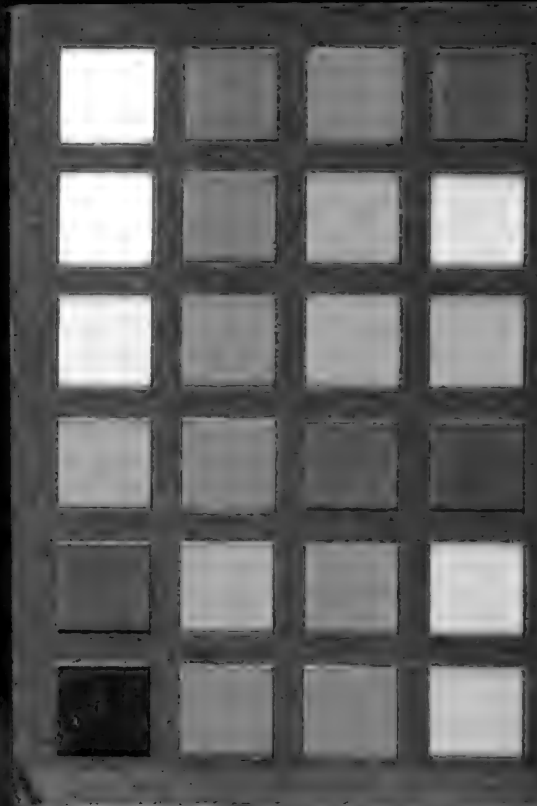
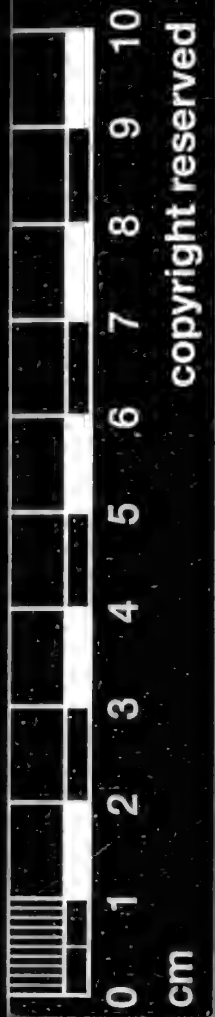




Lyons ? 10411

Body elongate, compressed, smooth, scaly except on the head and body where they are small scales. Lateral line along the middle of the body. A little or two on each side of the tail, between and in advance is a small horizontal scale. A small point; lower jaw projecting in advance of the upper. Both jaws with compressed, trachant teeth, which increase in size posteriorly. The tongue, vomer and palatine are small. Preopercle rounded, as are also the margins of the gill covers. Eye small. Two nostrils in front of the eyes, the posterior one vertical, narrow, the other circular. Branchial rays seven. The first dorsal long, composed of numerous slender rays. Left dorsal small, set back from the first, the space between the left dorsal and caudal occupied by 8 small sub-triangular finlets. The anal fin is keeled like the left dorsal, but much less, more posterior, and followed by 5 small finlets. Vent just in front of the anal fin. Ventrals

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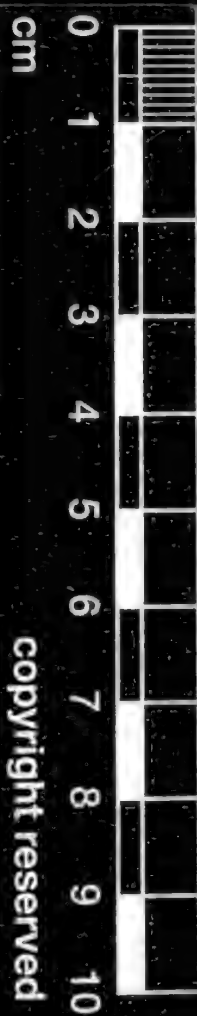


very small, is under beneath the pectorals,  
and their last ray, bound by main branch  
to the belly. The pectorals are also small,  
sub-falciform, bandal divided into two  
ventrally slightly curved lobes.

Species Zebra, Garrett

Lat. 12° 10' - 14° 10' N. Long. 105° 10' - 110° 10' W. P. 27;  
Depth, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

The dorsal and ventral outlines  
are nearly horizontal between the  
ventral and anal fins. The greatest depth  
of the body is comparable to the total length of the  
is as one to eight and the thick ness  
equals two-thirds the greatest depth.  
The head comprises a little more  
than a fifth of the total length, and  
tapers away from the rear of the  
eyes. The gape of the mouth is deeper  
slightly more than wide. The eyes  
are horizontal oval, their length ex-  
ceeding their width in the length of  
the pinnules are situated a little  
nearer to the hinder margin of the  
opercle than the end of the snout. The  
hinder tip of the maxillary reaches  
a triple distance to the anterior  
end of the orbit.



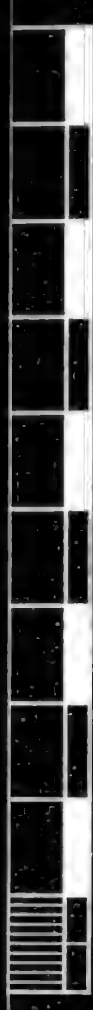
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HISTORY  
MUSEUM



The first dorsal fin commences immediately over the base of the pectorals, and extends over a base one third the total length of the fish, caudal excluded. Its height is compared to its length was two to eleven, the posterior half the deepest, and a concave emargination on the anterior half of the upper edge of the fin, so that it has a comb-like margin. The soft dorsal, which in our specimen is nearly one inch long. The spiny dorsal, commences about midway between the head and the base of the caudal fin. It is not so deep as the first dorsal, and the anterior half is about rounded, and the upper margin is slightly concave. Its length exceeds its height, the similar shaped anal commences a little anterior to the middle of the soft dorsal fin. The pectorals in our specimen measured 3 inches long, and the caudal measured 7 inches from tip to tip of the lobes.

Color Dull, above bluish grey, with silver beneath and a bright indigo blue above, with numerous small spots.

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MUSEUM



0 1 2 3 4 5 6 7 8 9 10  
cm

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above, dorsal grayish silver narrow  
stripes which are more or less wavy, in-  
crease to and some forked. Ventrals silver.  
The dorsal, caudal and pectorals  
bluish steel. Ventrals dusky bluish steel  
grayish silver.

Length 4 inches.

A single specimen caught  
300 miles north of the Harvey Is.



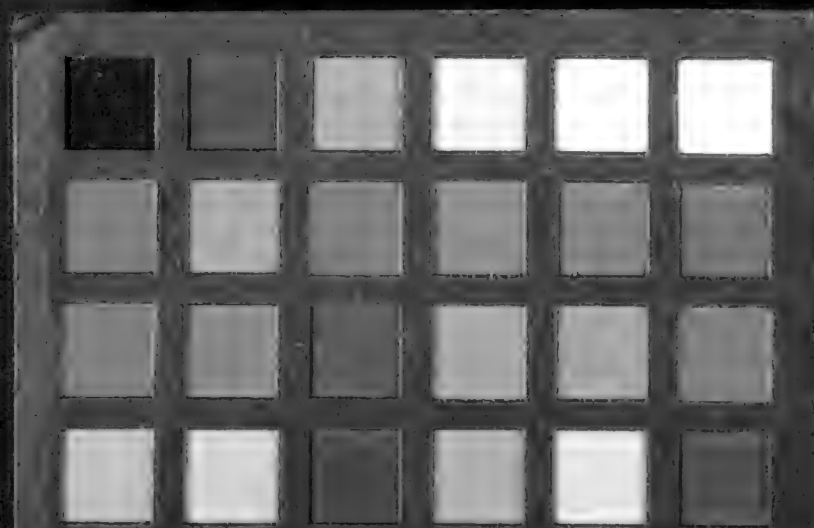
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MUSEUM



411  
201



*Acanthocybium solandri*



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HISTORY  
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*Uryalium*

Des-4p. 9, 14. 1844, 1845, 1846, 1847, 1848, 1849.

The large species is entirely  
arched on both upper and lower jaw bones,  
and the greatest length is compared to  
the total length is as one to six, the  
thickness being equal to half the  
above mentioned length. The color is  
scarce, is white, the lateral line  
is elevated third tube, extending in  
its course, and a little posterior to  
the first dorsal at a moderate degree  
of curvature below the median line  
of the body. The lateral curvature in the  
canal tract is not prominent in  
shape. The head is composed nearly a  
fifth of the foot, and the lower jaw  
is much more obtuse than the upper.  
The hinder tip of the maxilla  
is in a plane with the posterior end  
of the orbit. The eyes are sub-circular  
in shape, their greatest diameter is  
entering seven times the depth  
of the head and about twice the  
advance of them upwards to be put  
as shown from above in the drawing.  
The preopercle is at a distance in

NATURAL  
HISTORY  
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0 1 2 3 4 5 6 7 8 9 10  
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The mouth is large. The teeth are nearly  
the same as in No. 111.

The first dorsal which can be  
pulled back into a groove, is small,  
and inserted a point above the base  
of the pectorals. It passes over a base  
equal to a fifth of the total length  
of the fish. The rays are flexible, the  
first half as tall as the second, which  
latter is followed by four or five of  
about equal height, and the succeeding  
one or two are lower and so that the  
last ray is but little above the  
groove.

The second dorsal is separated  
from the first by a free space  
equal to the diameter of the eye.  
It is rigid, and its base is half the  
length of the first fin, exceeds the  
width of its base, and the shape  
is sub-triangular, obliquely concave  
above. The pectorals are four numbers  
with three and beneath.

The anal fin though similar  
to the first dorsal is smaller and  
a little more posteriorly.

The ventrals are small and  
the pectorals are sub-falciform.  
The caudal is strongly forked each



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color equal to the length of the  
head.

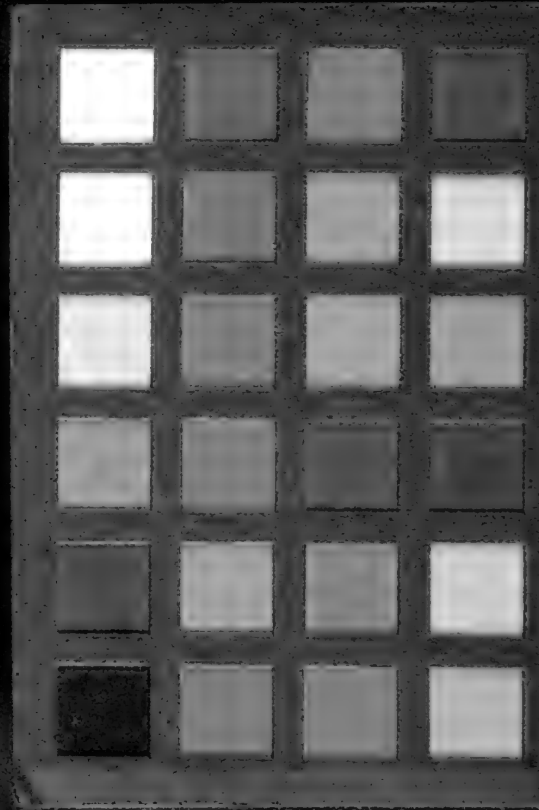
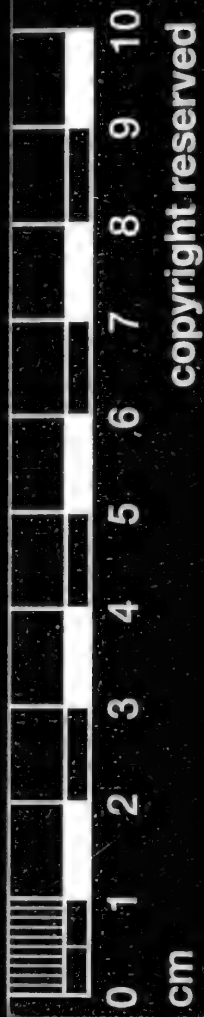
Color of the upper part of  
a bluish steel and black silver  
beneath. (In the young the blue in  
the lower part is not so intense) and  
marked by numerous lead colored  
oblique oblongate dusky and spots.  
Irides yellow to orange. The front  
lens, feet and ventral black-  
ish. Soft dorsal dark. Scales  
steel blue and anal darker. The caudal  
fin blackish.

Length 50 mm.

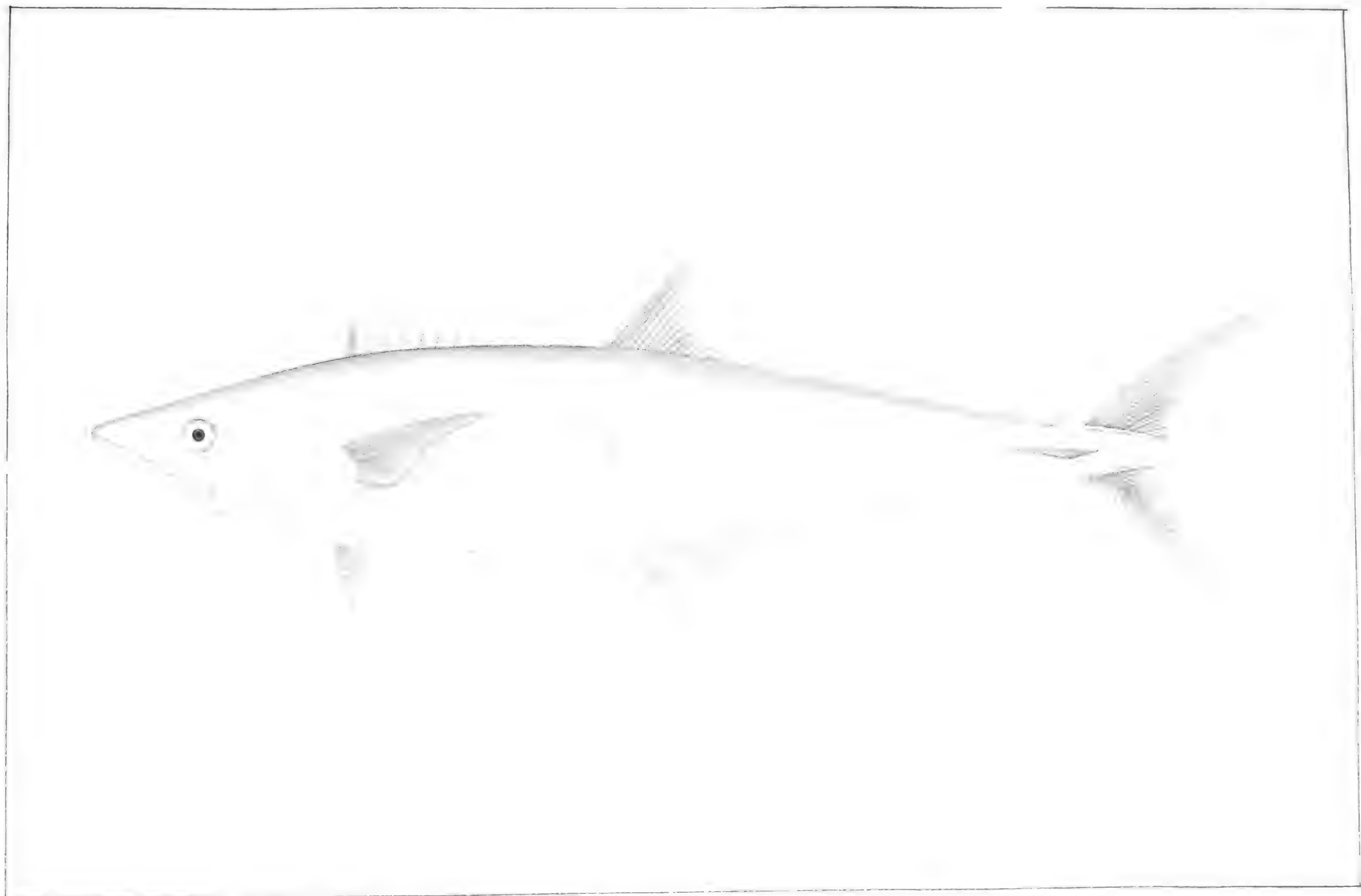
Hab. in the lake

Station near Laurel

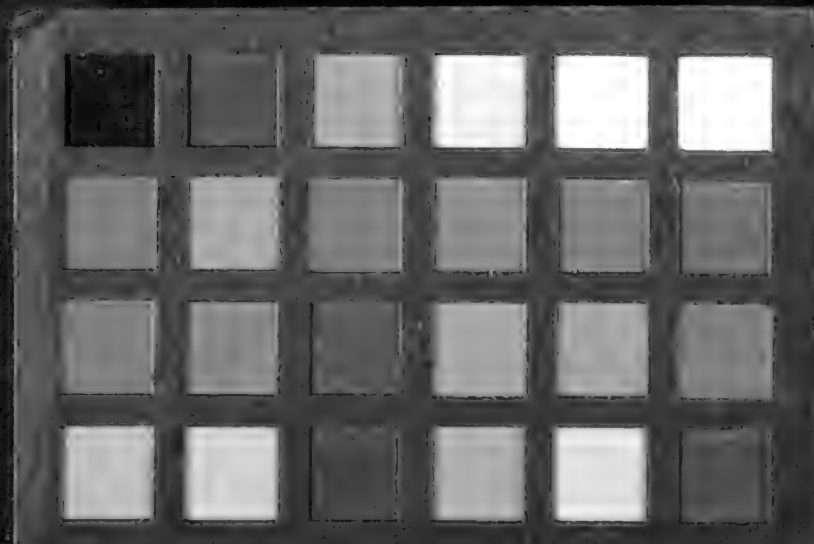
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HISTORY  
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*Cybium*

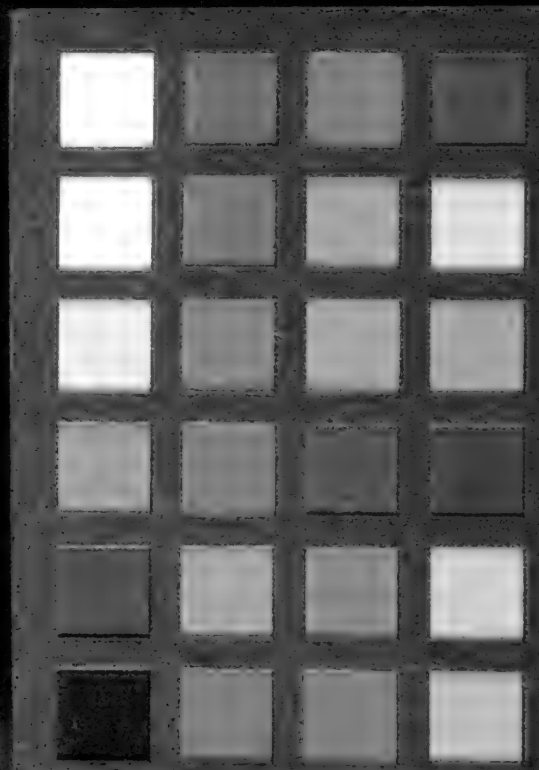


**N** NATURAL  
HISTORY  
MUSEUM

*naucratus*  
Echeuris. 10467

For the run, formula, and description  
you must consult the specimens I  
have sent you. Not having any notes  
or specimens to refer to I have not  
been enabled to make the run or  
the drawings.

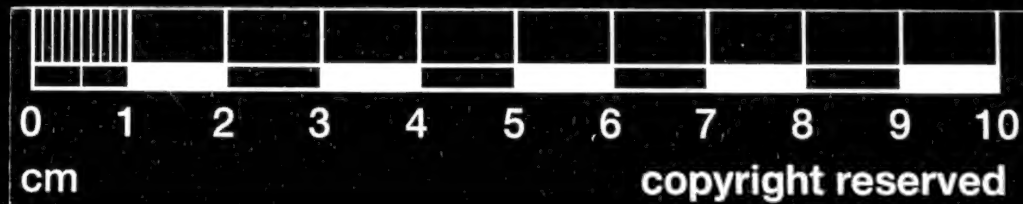
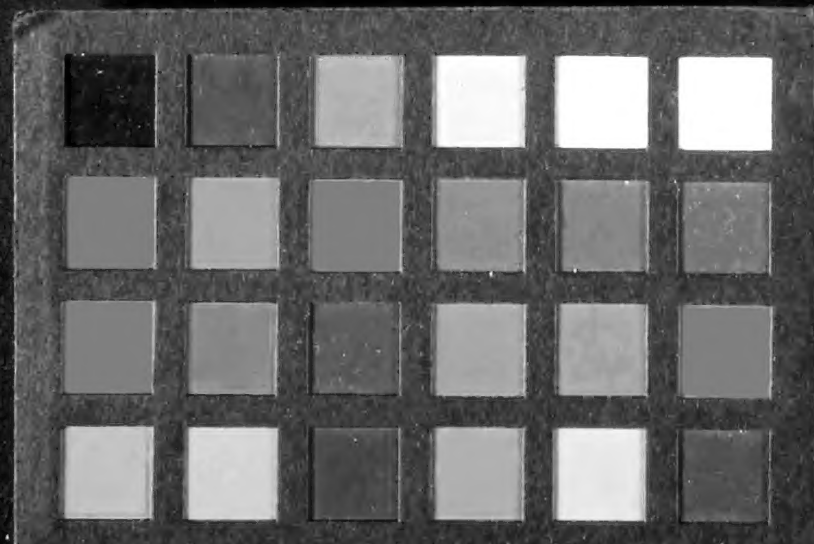
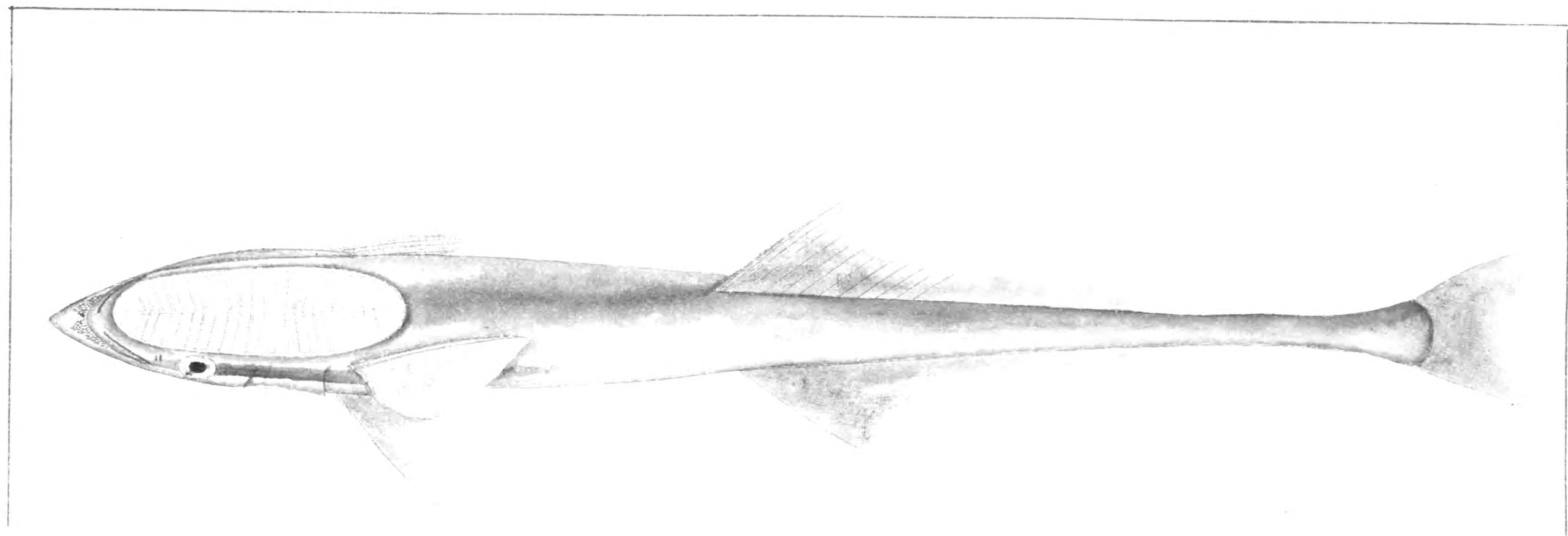
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*Echeneis naucrates*

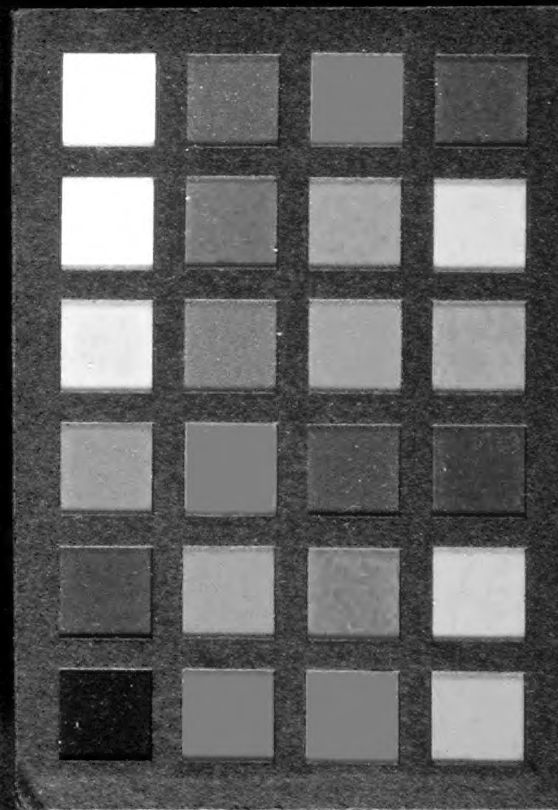
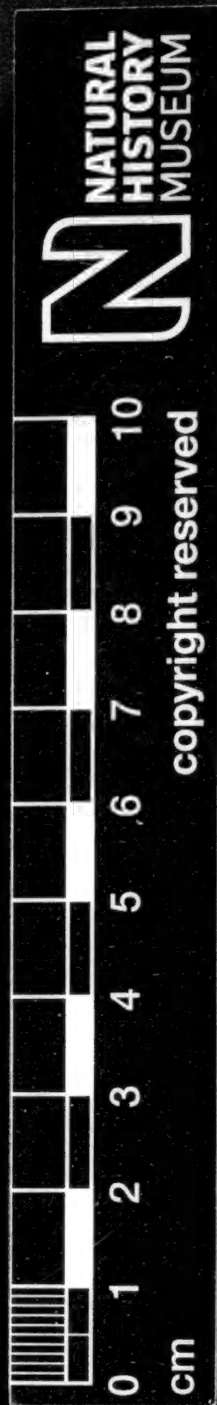
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203



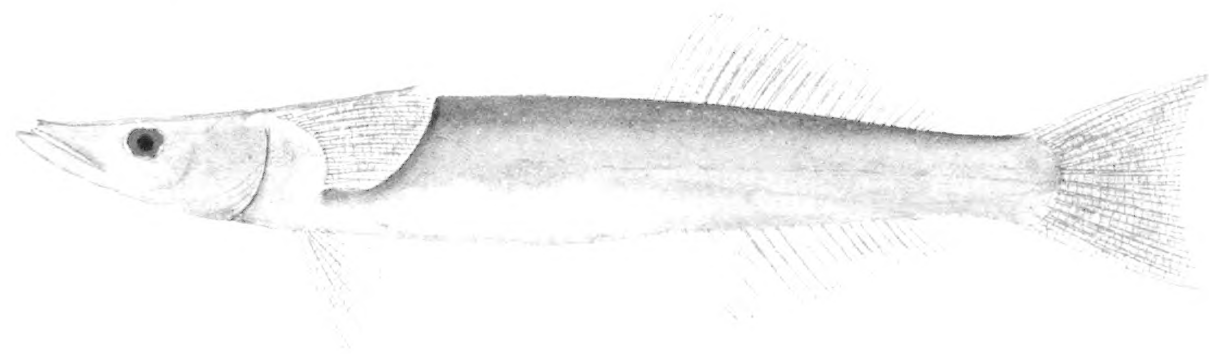
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*Handwritten text, possibly a signature or name, in cursive script.*

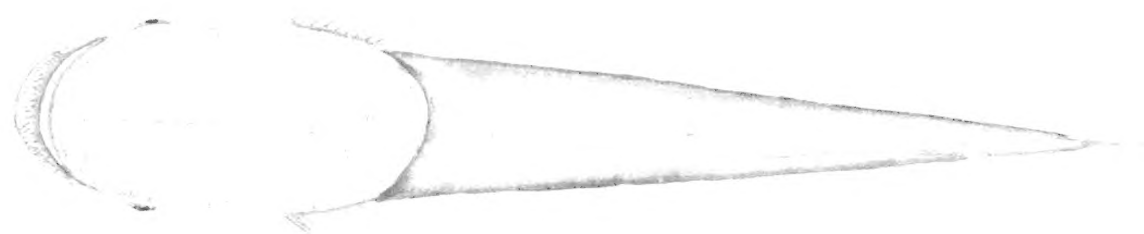






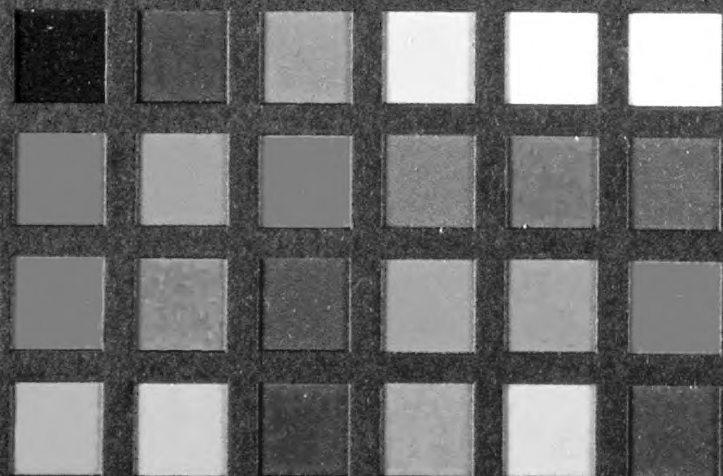
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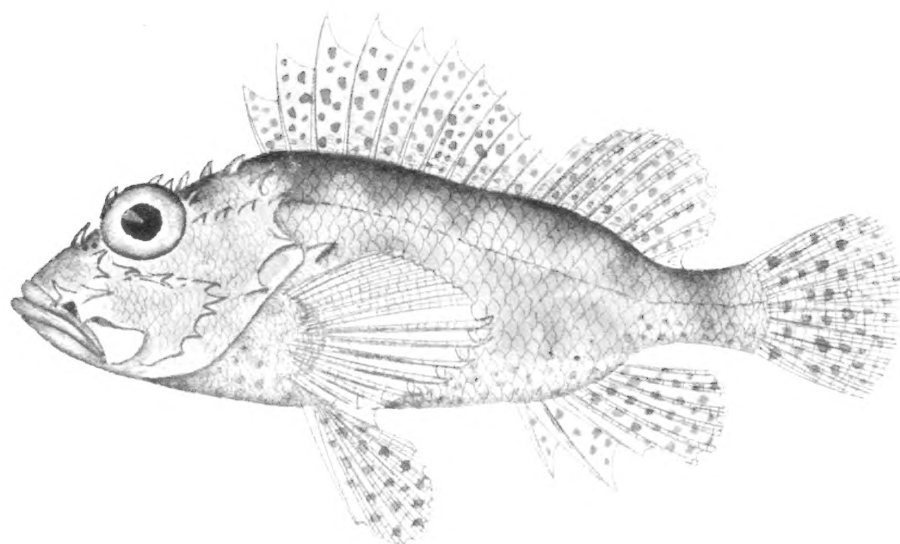
*Echeneis remora*

393



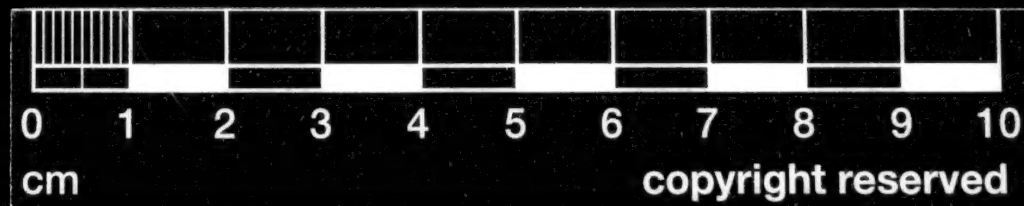
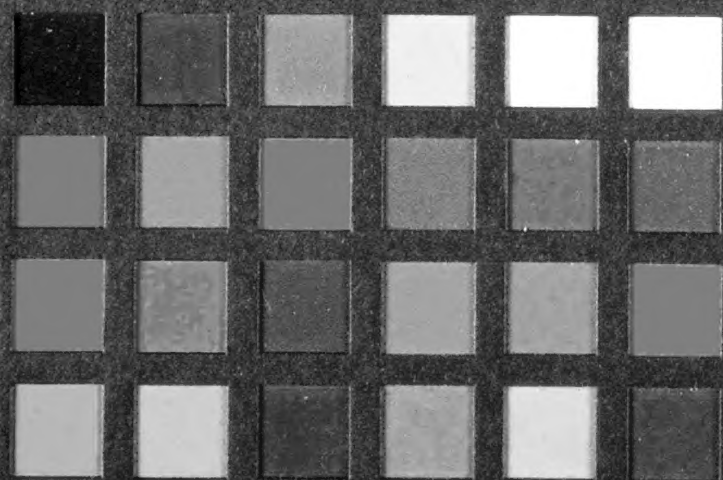
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122



*Scorpaena* f.

57.



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